SERMONS OF A CHEMIST

BY

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TO

BROTHER ALFRED

WHOSE SERMONS WERE THE INSPIRATION OF MY YOUTH

AND TO

SISTER FLORA

WHOSE SYMPATHETIC ASSISTANCE HAS MADE THIS BOOK POSSIBLE

THE AUTHOR DEDICATES IT

WITH GRATITUDE AND AFFECTION

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PREFACE

A SERMON by a lay-preacher may be worth listening to. It gives a parallax of thought and feeling as they appear to the observers from two very different points of view. If you wish to get the distance of a heavenly body, you know that you must take two observations from remote points of view,—in midsummer and midwinter, for instance. To get the parallax of heavenly truths, you must take an observation from the position of the laity as well as of the clergy.—Suppose a minister were to undertake to express opinions on medical subjects, would you not think he was going beyond his province?—said the divinity student. Let us look at this matter—I said. If a minister had attended lectures on the theory and practice of medicine, delivered by those who had studied it most deeply, for thirty or forty years, at the rate of from fifty to one hundred a year,—if he had been constantly reading and hearing read the most approved text-books on the subject,—if he had seen medicine practised according to different methods, daily, for the same length of time,—I should think, that if a person of average understanding, he *was* entitled to express an opinion on the subject of medicine, or else his instructors were a set of ignorant and incompetent charlatans.

OLIVER WENDELL HOLMES.

These remarks by "The Professor at the Breakfast Table" must serve as my justification for this book.

But today the clergy are not so jealous of their preroga-

tive as they were in the time of Dr. Holmes. In fact, I think that they are inclined to the opposite extreme, that they relinquish too readily their function as teachers of the church and are too much inclined to call in a layman, distinguished in other fields, to express his amateurish views of the theological and ethical questions on which they are by training and profession the expert authorities.

Be that as it may, the preacher nowadays is not perched so high above his parishioners as he was in former times, and it is easier to climb from the pew into the pulpit. As professor and as editor I have frequently been called upon for talks in college chapels, and as elder or deacon in Presbyterian and Congregational churches for the last thirty years I have occasionally had to occupy the pulpit when the preacher failed to appear or during an interregnum in the pastorate. On such occasions it is the custom for kind-hearted members of the congregation, seeing that the speaker was no preacher but was doing his best, to come forward and shake his hand and express the polite wish that they could see the sermon in print that they might preserve it and ponder it at leisure.

I have figured up that if all those who have expressed such a desire would buy a copy of this book the sale of the first edition is assured. Anyhow it is worth trying the experiment.

EDWIN E. SLOSSON.

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SERMONS OF A CHEMIST

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THE CHEMISTRY OF THE GREATEST MIRACLE IN THE BIBLE

And God formed man out of the dust of the ground.
Genesis 2:7.

I HAVE chosen this particular miracle for discussion for three reasons especially.

First, because it is such a remarkable event in itself. It is, as it seems to me, unquestionably the greatest miracle narrated in the Bible or out of it. Not only has nothing stranger occurred in the history of the world, but nothing so astounding has ever been imagined by any romancer. This truth is stranger than any fiction ever devised. The gulf between animate and inanimate matter is so great that we cannot conceive, if we did not know it was true, that a clod should ever feel and think. The more we study it the deeper appears the mystery. There is no other subject probably which is engaging so much attention on the part of scientists. The problem is being attacked on the one side by chemists and on the other side by physiologists, but it is not at all solved. They are like workmen tunneling a mountain, who have been working from opposite sides for years but have not yet met and cannot yet see through it.

The importance of this miracle appears, too, when we think that if it had never occurred this world would be a mere insensate ball of stone rolling through space.

When we look at the stars on a clear night we count thousands of these suns, each of which may have as many planets as our sun. Yet of all the spheres in God's unmeasured universe this is probably the only one on which this miracle of life has happened. All worlds but ours are dead worlds. The chances against such a thing occurring are millions to one. Yet it did occur, and we here are living witnesses of it. It was the birth, not of an individual, but the birth of all mankind.

The second reason why I think this miracle may be of interest to you is that it is of especial interest to me. It is a chemical miracle. It is just as much a chemical statement as that hydrogen and oxygen unite to form water, and that wood burns to ashes, water, and carbon dioxide gas, or that wine turns to vinegar. It should be studied, tested, and examined in the same way as any other phenomenon. It is because I know something, although very little, about this miraculous transformation that I choose it in preference to other remarkable events belonging to departments of science which I have not studied.

The third reason why I selected this miracle is because of its indisputability. No one can doubt that it occurred. If I had taken other chemical miracles, for example, the changing of the river Nile into blood, or the water at the marriage feast into wine, it might have been objected by some that they did not believe it. Some might have said with great reason that in an unscientific age we could not expect an exact statement of facts which would withstand all the destructive criticism of after ages. Others might have said with

equal reason that we are not expected to take literally the legends of Orientals who are so much given to allegory and metaphor. It would be useless for me to talk about anything that you did not all accept as literally true. And this particular miracle cannot be doubted because we see it repeated all about us every day, yes, even in our own bodies. For what was true of Adam is true of us. Each one of us was created out of the dust of the earth, not thousands of years ago, but within the past few months. If any one raises the objection that Adam did not exist, I will take instead Adam Smith or any one you please. In the original Hebrew, I have been told, "Adam" is not a proper name; it is simply "Man." So far as we know all men were formed from the dust of the ground, and although it would be impossible to prove that Adam, or some one else, was not created in a different way from that described in the Bible, it is so improbable as to be inconceivable. We have to accept this daily miracle on faith, for we do not understand it.

God is the same yesterday, today and forever. His laws are the immutable laws of nature. In him alone there is no variation. If this were not so the world would be a chance world where we could rely upon nothing. Water might run up and down hill with equal readiness. We might grow old one week and young the next. We would plant wheat expecting a harvest in a few months, but the seed might come up the next day and then prove to be cabbages. It is only our faith in the unaltering will of God that prevents us from expecting these things to happen. We do not know why they don't. We only believe they will not and never

have happened. So we have no hesitation in saying that Adam was created as we were, that is out of the dust of the ground.

It is no less a miracle as a result of direct natural causes. A natural law is simply a statement of what will happen under certain circumstances; and this miracle is an unexplained chemical action. It does not make it less a miracle that it has happened many million times since Adam. It makes a difference in the surprise it causes in us, but the act is the same whether repeated or not. If I should be able to change lead into gold, just once, without knowing how I did it, under such conditions that no one could doubt it, I would be regarded as the greatest chemist in the world. Would that reputation be lessened if I could repeat it every day? Or if I could explain how I did it? Or even if I could teach others how to do it? On the contrary, the more times the act was repeated, the more completely the process was explained, so that anybody could do it, the greater would be the admiration aroused.

So a miracle is not the less a miracle if it can be explained. Not that we can really "explain" anything ultimately, but many things we can understand sufficiently to satisfy all except the most curious among us, and that we call "explaining."

Those among us whose God is Lord of the Unusual and Inexplicable alone live in a constant state of fright lest he should be eventually expelled from the universe by the finite minds of men. They are lovers of darkness rather than light, not because their deeds are evil, but because their faith is frail. But science is like a

camp-fire on a dark night. As you throw more wood on the flame, the lighted circle widens, but the surrounding darkness expands in proportion and becomes more impenetrable. As the area of enlightenment spreads we come into contact with more mystery.

If a miracle is an event absolutely unique in the history of the world, if it could never happen again under any circumstances, then it does not matter in the least whether it is authenticated or not. Science can make nothing of it, not even the science of theology. But if a miracle is a spectacular demonstration of a universal law, then it is of permanent value to us. Its value, however, is not at all dependent upon the preservation, or even the authenticity, of the record of that particular instance. If some antiquarian should unearth a death-bed confession of Joseph Priestley stating that he had never discovered oxygen, and that his paper, claiming that discovery, was a hoax, most chemists would not care enough about it to read it. Priestley may have been a fraud for all we know, but oxygen is a reality as we all know.

Science is based not upon verified facts but upon verifiable facts. It seems to me that religion rests upon the same solid foundation. A transmutation of bread and wine into flesh and blood is indeed miraculous and inexplicable, yet it is demonstrable and undeniable. Anybody can do it.

Some people have the idea that a miracle is a "violation of the laws of nature." This is an absurdity based on an exaggerated idea of what we call natural law, a common misconception among those unfamiliar with science. There are no laws *in* nature; there are

laws *of* nature which we make for ourselves. Strictly speaking, scientists do not discover the laws of nature. They invent them to describe the facts they find. These are mere descriptions of what has occurred in the past, and what therefore we have reason to believe will occur under the same circumstances in the future. A book on chemistry or botany is merely a history, after all. There can be no such thing as a violation of natural law, because it is self-contradictory. If the statement in a textbook is a true law there is no exception. If there is an exception the statement is not a true law. It must be revised. You can violate the Volstead Act and it still stands on the statute books. If you violate a scientific law you abolish it or rather you show that it never existed.

Another absurd idea commonly heard is that because a miracle is the direct act of God it cannot be the result of natural causes. Everything that occurs is, in a sense, the direct act of God since without him nothing could happen or exist. Of the miracles of the Bible in many cases we are expressly told that there was an adequate natural cause. For example, the drying up of the Red Sea when the Israelites passed over. If it had not been expressly mentioned that this remarkable effect was caused by an east wind some people would have imagined it as the act of God reaching down and damming up the waters with his own right hand; or we would have had medieval artists painting pictures of angels sweeping back the waters with big brooms.

It is related in the book of Joshua that when the Amorites were fleeing from battle, after having been

defeated by the Israelites, the Lord chased them all the way up to Beth-horon and down on the other side, to Azekah and as far as Makkedah, and cast great stones down on them from heaven, and killed more of them than the Israelites had slain by the sword.

Now imagine how an artist would represent that. In the twelfth century he would have made a great big old man with a long, white beard, throwing stones out of an upstairs window at the flying soldiers. In the sixteenth century he would have painted the Amorites pursued by what he called angels, fantastic creatures invented by himself, human beings with an extra pair of limbs, feathered, attached to their scapulas and held perpendicularly in such a way that they could be of no kind of use for a support, since their possessors could neither flap them nor soar with them.

If the passage had been left without further comment it would have been a stumbling block to Christian faith. Infidels would have jeered at it as impossible. Apologists would have tried to evade the question in some way, or would have called it a violation of natural law and therefore a miracle. It was a miracle, a wonder, and a sign, but it was not a violation of natural law, nor was it necessarily in any direct sense more the act of God than everything else, for the narrator goes on to mention incidentally the comparative number of persons killed, as he says, by these hailstones. Reports of casualties from the victorious side are always to be received with caution, as we found in the late war, but the author evidently did not think that by assigning a natural cause he was making it less a miracle.

A natural law is simply a statement of what happens under certain circumstances. If we drop a stone, it falls to the ground. The scientific way of stating it is that the stone and the world are drawn together by a force proportional to the product of their masses and inversely proportional to the square of the distance between them. The theistic way of stating it is that God puts the stone and the world together. Both are true; neither is an adequate explanation.

The particular miracle we are considering is probably the most completely inexplicable of all chemical actions. All we yet know is a little about the way the process goes on, but the more we know of it the more curious and marvellous it is. For example, the materials which go to make up our bodies are found in the soil, the water and the air, and yet we are not able to make use of them directly. All the chemical elements of which we are made and which we have to get in our food are contained in any handful of dust we may pick up. Yet we cannot eat it, or if we do we cannot use it to build up our bodies.

One of the most important elements of our bodies is nitrogen, our most expensive foods are those that contain it. Now the air is four-fifths nitrogen. Two minutes' breathing would supply our need for the day, and with every breath we inhale enough nitrogen to meet our bodily wants for hours, but we let all the nitrogen out again without using a bit of it. The reason is that man is a dependent creature. Plants live off of the soil and we live off of them. Most plants even cannot use this free nitrogen of the air, but have to have it prepared for their use in the ground. We

are parasites of the plants, and if we eat animal food we are parasites of parasites. So all the material of our bodies comes ultimately from the earth under our feet except the element oxygen which we get from the air we breathe. Thirty times a minute we repeat this miracle, some particles of non-living matter are drawn into our bodies and become living matter, just as with mathematical precision the reverse process is repeated. Particles of carbon which have formed part of our living bodies are thrown out with every breath and sink into the Nirvana of the inanimate world, changing their allegiance from the animal to the mineral kingdom.

This transformation from living to non-living matter is just as great a miracle as the reverse process when you think of it. If it is a wonder how we can live, so it is equally inexplicable how we can die. Life and death are the twin mysteries of the world. The double miracle of death and resurrection is the regular rhythm of life.[1] People say we die but once. Really we die

[1] Does all this sound too rhetorical and metaphysical to be regarded as sober science? If so, I fear you have not kept up with the trend of recent scientific literature. My language is tame and prosaic compared, for example, with the following passages from the latest and most authoritative work on the science of the cell:

"It is perfectly correct, therefore, from this point of view to speak of living and dead hydrogen atoms. We can even go farther with the simile if we wish and say that when the living highly reactive form of the atom passes to the dead, unreactive form, the soul of the atom escapes at the moment of its death, for a ray of light leaves the dying atom and travels onward in space, until perhaps it encounters and is absorbed by some other dead hydrogen atom, which it again raises to life by thus giving it a soul. What

every few years just as entirely as we ever shall. That is, in the course of a few years every particle of our bodies becomes part of the soil and air as completely and in the same way as when we are buried. We are dying all the time, sometimes rapidly, sometimes slowly, but always surely. If we should, for a few minutes, cease to die we should cease to live. That is, if we should cease to throw off the waste matter from our organism we could not receive new and energy-bearing matter from the plant and animal world.

Suppose a miserly man should say to himself: "What is the use of spending money for more food? I will not waste my substance by throwing it out upon the air with every breath. I will simply keep what I have, for I am perfectly satisfied with it." The man would be dead in ten minutes, poisoned by his own breath. We can only gain when we spend. "He that

is this soul? It is a minute portion of the luminiferous ether; of time and space; of eternity and infinity.

"For us it is oxygen which thus summons the dead from the tomb; which vitalizes the dead molecules and atoms. The energy is stored in certain of the atoms of the molecules of protoplasm in the form of widened orbits of rotation of the electrons. It is this which gives them the power of reacting and of passing back to the dead. When such electrons fall back to more stable configuration, the atom and molecule reverts to the dead and inert form such as we keep in bottles. It is the oxygen, then, which vitalizes all animals; but it is from the sun that the vital, radiant energy has come. It is in fact the luminiferous ether which has made things alive, for the ether is the great storehouse of energy; it is itself nothing else than space and time; energy and time. Energy is but ether divided by time. Quantity of energy is quantity of ether per second. So all goes back to the ether; infinity and eternity. From it is derived our energy and life."—PROFESSOR A. P. MATHEWS of the University of Cincinnati in *General Cytology*, pp. 28 and 92.

loseth his life shall find it." The molecules we give off with our breath come back to us again charged with new energy from the central power house, the sun. The faster we die the more alive we are.

Not all parts of the body wear out equally fast. The softer and more mobile tissues change most rapidly. The blood changes its composition constantly. But even the particles of lime, carbon and phosphorus in the solidest bone are constantly being taken out and replaced by new ones just as a railroad bridge is rebuilt, piece by piece, without tearing it down at any one time. We get entirely new finger nails every four or five months, and new toenails once a year. Our eyelashes last us only about a hundred to a hundred and fifty days. We get a whole new skin oftener than we get new clothes—that is, most of us—for that is renewed every month. The only part of the body that is not completely changed in the course of a few years at the longest is the enamel of our teeth, and that is why we have those two plagues of humanity, toothache and dentists.

So it would seem that since we are not composed of the same material we cannot be the same persons we were years ago. According to this view no man ought to be held to a contract longer than, say, seven years at the most. If a man is arrested for a crime committed ten years ago he can easily prove an alibi. He can show that every particle which constituted the man who did the deed has long since been dissipated and now forms part of the air, the sea, and the soil. A man never celebrates his silver, or even his tin, wedding with the same woman he married. He may call her his

wife still, but he is really not married to any part of her—except as I said, to her teeth, and perhaps those are changed. Speaking from a materialistic standpoint a couple ought to have the ceremony performed over again every few years so as to stay married.

Why is it that these things, which are literally true, seem to us so absurd? It is because there is a fallacy in the idea. It is the fallacy of materialism. We know we *are* the same persons we were last year and the years before. Although we may have changed, it is not because we have new finger nails, new eyelashes, new bones, new everything. That did not change us. We know that if every particle of our bodies were suddenly replaced by new particles of the same kind we would not know the difference. We would be the same persons. In other words the person is something quite distinct from the matter which composes his body. It is a different body, but the same man. It was Heraclitus, one of the earliest of the Greek philosophers, who first saw this and said, "The water changes, but the river remains the same."

We care nothing, really, for the particular atoms of carbon, of hydrogen, of oxygen, of nitrogen, that make up what we mistakenly call ourselves. Let them go. We can get more; or if we cannot we do not want to keep these longer. We are not attached to the matter of which our bodies are composed. In the course of a few weeks or months, what is a part of me may become a part of you: " 'Twas mine, 'tis his, and has been slave to thousands."

We see how foolish were the Egyptians, who believed that for a resurrection of the individual it was

necessary to preserve intact the identical body of the man who died; or, to speak more accurately, the last of the many bodies which the man had in his lifetime. They embalmed this body to prevent it from decaying, they wrapped it in multitudinous folds of linen to prevent it from being damaged, and built over it the pyramids to shelter it from destruction. The character of the protests against the disturbance of the Tutankhamen tomb shows that superstition still lingers.

Scarcely less grossly superstitious and materialistic than the Egyptian is our own treatment of cast-off bodies. We put them in elegant caskets to keep for a few years the elements from being of further use to the world. We transport them long distances that their earth may mingle with the earth of some selected spot. All this is antichristian in the extreme. If it is true that matter composing the bodies of our dear ones is sacred to us, we should not let it go to waste during their lifetime. We should preserve in mahogany and marble the breath, the hair, the nails, and all the material which has formed part of those whom we love, and has been cast away. From the standpoint of the Bible our funeral customs are heathenish; from the standpoint of science they are absurd and injurious; yet in opposition to both we still cling to the superstitions of materialism.

Our bodies do not belong to us; they are only rented, and we are merely transitory tenants. Form is more permanent than matter. The person persists while the body disappears. At least, we know this is true while we live, and we trust it is true when we die. Our bodies are part of God's modeling clay, which he is continually

shaping into new and more beautiful forms; never throwing any of it away, never wasting it, never leaving it long idle. The vain thought of the pyramid builders that they would baffle God's plan and prevent the clay, which once formed the body of Cheops, from being ever again of use has proved fruitless. The clay of the great Pharaoh has passed through thousands of transmigrations in plant and animal and mineral, more wonderful than the path of the soul described in the Egyptian Book of the Dead, since it was first placed in what the priests of the day called its "eternal habitation," the most substantial structure ever raised by the hand of man, the Great Pyramid.

Continuously, in and out, over and under, circle the elements; never at rest, never the same, all bent on the mission appointed them before the creation of the world. Never faltering, never deviating, each atom follows the path through empty space marked out for it millions of years ago; a path so complex that no mathematician can calculate it for the thousandth part of a second, yet so regular that no variation can be detected in years. Back and forth without stopping moves the shuttle of matter, eternally weaving the living garment of God. No eye can follow its swift movement, no imagination can conceive it, but all that is, is what it seems to be.

As Jacob on his pillow of stone saw in his vision a ladder with angels ascending and descending on it, so we, with our vision clarified by science, can see the atoms as the angels, the messengers of Almighty God, ascending and descending through the scale of life, now carried about by the air, then washed down by the rain,

then buried in the soil; then caught up by the hungry rootlets and carried through the sap and stored in the seed or the fruit; then rising to a fuller life in some animal; then caught up and made part of the mechanism of thought and feeling in man; then cast out with the breath to begin again their wanderings; obedient to God's laws whether in high or low estate, equally doing God's service whether in the brain of a philosopher or in the body of a microbe or buried in a rock, apparently useless and forgotten for thousands of years. So forever is repeated the miracle of the Garden of Eden when God first formed man out of the dust of the ground, and breathed into his nostrils the breath of life and man became a living soul.

> I fear not Thy withdrawal; more I fear,
> Seeing, to know Thee not, hoodwinked with dreams
> Of signs and wonders, while, unnoticed, Thou,
> Walking Thy garden still, communest with men,
> Missed in the commonplace of miracle.
>
> —Lowell.

THE SPIRITUALIZATION OF DAILY LIFE

Whether therefore ye eat or drink, or whatever ye do, do all for the glory of God.—I Corinthians 10:31.

THERE are two ways of looking at life that are common and erroneous. One is the materialistic, in which people are so absorbed in their daily cares and trials, or in their sordid aims and schemes, that they never have time nor inclination to look beyond them. They spend their time raking over their own muck-heap without ever so much as glancing upward. They love the world, its work, and its pleasures. They smile incredulously when we would tell them of another and a spiritual world.

The other class, that may be called of nobler mind than the first, are still mistaken in their view of life. They know of the spiritual world and long to live in it wholly. They have had the heavenly vision, and henceforth despise everything earthly. They have looked on the sun, and their eyes are dazzled so that when they look down to earth again it seems very dark and gloomy. By contrast with their high ideals, the realities with which they are surrounded seem poor, cheap, mean. Nothing earthly is worth while. All their efforts are to escape from the world, and since they cannot yet enter a higher they seek to separate themselves from this one as far as possible, lest they become contaminated. Their conception of religion is as a sort of ecstasy, lifting them out of their daily life; not helping

them in it. Everything religious must be kept separate from everything secular. Religion put to practical use would be to them a degradation; like Pegasus employed as a plow horse. Their religion must be insulated from daily life lest it should leak away, like electricity. Religion must be confined to a separate place, special days, a different language, and particular exercises. Now this latter class is far above the first. They do see the spiritual, but they do not see its relation to the material. They have religion, but they don't use it. That is a great mistake; for that is what religion is for. It is practical. It is intended for everyday use. It is our daily bread, not a Sunday dinner. It is not a means of escape from this miserable world, but a way of living better in this world, and making it less miserable. Religion is something to live by, not merely to die by. It is primarily for this world, since a large part of what goes to make up our religion will probably be useless in another world, for instance, almsgiving and churchgoing. The New Jerusalem is a city without a church. Those whose religion is confined to the church will not be at home in heaven.

Still the aim of a great many persons is to separate religion as completely as possible from life. They have done this in many ways.

First, by confining religion to certain individuals. Finding it impracticable for all to live according to their ideals, amid the struggles and temptations of active life, it was decided better that a few should be relieved of these struggles and temptations in order to develop the higher life undisturbed, rather than that piety should perish from the earth. So some of the

early Christians became hermits in the deserts or on mountain tops or pillars. It was the monastic idea. They were called "The Religious" and had nothing to do but be good and to pray for those who had not their spiritual opportunities. The idea is well expressed in a French book I was reading recently, in which the monasteries were called the lightning rods of the country. They averted the wrath of Heaven just as ten righteous men would have saved Sodom. But it was found in the Middle Ages that this isolation of a religious class results in extravagant and useless piety on their part, and that the populace, deprived of association with the more spiritual-minded members, became ignorant and immoral. The double standard of morality is a mistake. But in our conception of the office of the minister we keep much of the old feeling. We hire a pastor to do our religion for us. We look upon ministers as forming a class with other ethics and other duties than ours. Now it is, indeed, advisable that we distinguish by title and position those who have spent years in definite ethical work and study, and who have been deemed worthy to teach by persons of authority having the interests of God's kingdom at heart. Such men should be distinguished from others, however wise and good, who have not had this training and indorsement, just as the law requires a man to have studied medicine before he may call himself "doctor."

But there is no law of God that does not apply equally to minister and layman. If the minister is more strictly moral than his parishioners, as he generally is, it is not because he is under any obligation to be so. Paying a man to be good for you is as bad as

paying a man to do your praying for you. You might as well hire a man to breathe for you. Neither does contributing to the support of a minister relieve you from the duty of active religious work. That is laid upon all Christians alike. It may relieve you from the necessity of public and formal preaching, but the most effective preaching is not always done from the pulpit. It is done in the street, the shop, the schoolroom, to an audience of one or two, and from all sorts of texts. That ministry we can delegate to no one.

Neither can you hire a minister to do your thinking for you. Every group of Christians should have a man of technical theological training; it is a safeguard against religious fads and fanaticism. The church is right in insisting upon an educated ministry. But, after all, every one has to construct for himself his own theology. That is the prerogative of the Protestant, for which our fathers fought and suffered. It is the duty of the layman to devote what time he can to the study of religion in order to form intelligent opinions. This needs some insisting upon nowadays, as laymen are neglecting the study of theology.

Another way of separating religion from life is to confine it to special days. It has been found necessary to a high civilization that certain days be set aside, by mutual consent, in which the hurry and worry of business shall cease and an opportunity be afforded for the cultivation of the higher life. As in the Middle Ages, when war was perpetually waged, the Popes at times declared a "Truce of God," when no fighting was allowed, so we each week declare a "truce of God" during which our industrial warfare shall be suspended.

The Jews dedicated Saturday to this purpose, the Christians Sunday, the Mohammedans Friday. These days were established, in part, as anniversaries, as we have the Fourth of July, Memorial Day, and Armistice Day, to commemorate our great wars.

But just as there are people who confine their patriotism to the Fourth of July, so some persons keep their religion in their Sunday clothes. Devotion on any other day seems to them incongruous, if not sacrilegious. The Sabbath is not an institution of theoretical theology, but of practical religion. Its value lies in its use. "The Sabbath was made for man, and not man for the Sabbath." That is, man keeps the Sabbath for his own benefit, not to glorify the institution, or to commemorate the creation or the resurrection of Christ. Keeping the Sabbath and going to church are not virtues in themselves, but means used for the cultivation of virtue.

Then there are those who separate religion from life by confining it to particular places and ceremonies, who believe that a prayer said in a church reaches God more surely than one said in the workshop; that a certain spot of ground or building must be used for religious service; that particular kinds of clothing, music, intonation, find special favor in the sight of God by reason of some mysterious fitness quite apart from their appropriateness to the devotional mood, or the religious associations connected with them. Under the influence of a sixteen-foot organ pipe, one may easily mistake the palpitation of his diaphragm for the shivering of his soul.

We are all inclined to separate religion from life by

giving it a special vocabulary of its own. Religious phraseology is conservative because we dislike to change those forms of speech with which our deepest thoughts and emotions are intimately connected. The emotions are the foundation of religion, are most easily controlled through association, and this is dependent upon fixed forms. But the language of everyday life changes, and so, in time, it comes to pass that we have two languages, a sacred and a secular, hieroglyphic and demotic. This would not matter so much if all were brought up in the church; but they are not. The majority of the people in our country do not understand this "church language." That is one reason, I think, why preaching fails to reach and move those who have not been trained in the church. We talk to them in a foreign tongue. The greatest revival on record was on the Day of Pentecost: that was when every man heard preaching in his own tongue, wherein he was born.

We may think this an insignificant matter, but that is because we, who have heard and used this language from childhood, do not realize how strange and unfamiliar it sounds to the world outside, nor how repellent even a slight quaintness of phraseology is to the average man. The popular distaste for poetry and science is because both make use of an unfamiliar vocabulary. Read some of our hymns, or listen to sermons, with a view to seeing how they would strike you if you were not accustomed to the religious vocabulary, and had no associations with the words. How much of it would you understand, or be attracted by?

There is a group of artists who paint modern scenes with Christ introduced as one of the characters, eating

at the table of a poor mechanic, in blouse and overalls, or healing the sick in a city hospital. Dagnan-Bouveret and L'Hermitte so present Christ in modern settings. The artists of the Renaissance painted Christ in this way, surrounded by their own friends and neighbors. Now, however incongruous this may be from an artistic or historic standpoint, it is religiously correct. Every well informed person believes in the historical Christ; but Christians believe also in the Christ of today. What we need is to get a correct idea of what Christ was to his contemporaries, and then imagine what he would do if he were living now. Not Jesus the Jew of nineteen hundred years ago, transferred bodily to our midst, but in the form in which he would appear, if he came on earth today, a modern man, without a trace of the antique or outlandish in language, dress, or bearing. In so far as we can realize that, we are Christians knowing Christ.

We can realize Christ as a God in heaven more easily than as a man in the world, especially in our modern world. We cannot comprehend the real incarnation; how the Word which we reverence could become flesh which we despise; how the New Jerusalem can descend upon this filthy earth. This mingling of the divine and the human baffles our comprehension. We are slow to understand that by these metaphors is meant not a degradation of the divine, but an elevation of the human; the spiritualization of daily life. The unique thing about Jesus was that his religion was a part of his daily life. Others have preached, perhaps as eloquently; none has lived so eloquently as he. His position on earth was not so different from ours as we

sometimes think. He was not a priest nor minister, in the modern sense. He did not baptize, did not even have a church, did not preach regularly. He simply went about doing good; teaching informally, casually, when there was opportunity, helping people out of trouble, denouncing wrong when he thought it would do any good. Just what we all have a chance of doing; just what we all should do.

Even his mighty powers were applied to such purposes as we should apply our lesser ability. The miracles related of him were never spectacular, nor prearranged. They were merely helpful and casual; providing a lunch on the hills when the people were tired and hungry, assisting fishermen who were out of luck, going into the kitchen to help a perplexed and embarrassed housewife when the wine ran low—pure friendliness and neighborliness.

He preached, yes, but as willingly from a well-curb as from a pulpit. He took a text from the Scriptures sometimes, but more often from field and orchard. He saw "tongues in trees, books in the running brooks, sermons in stones, and good in every thing." There is usually some one ready to criticize a modern preacher who follows this example. Christ's favorite place for meditation was among the hills and groves. He did not often go into the temple to pray, but rather to the olive grove. Now there is nothing sacred about olive trees. It is a Palestinian equivalent to our apple orchard. No special place, no stated time, no formal phrases were sacred to him; all was equally sacred.

The aim of Christ was not to establish a religion for recluses, nor to introduce a new ritual. It was to spir-

itualize daily life. There are two acts closely connected with our animal natures: eating and washing. I have heard people object to eating and drinking in public, asserting that such processes, as is already the case with cleansing of the person, should be carried on in private. Byron could not endure seeing a woman eat. Marcus Aurelius felt that he had reached the height of pantheism when he was no longer disgusted at the sight of dirty bath water. Now, it is these two necessary but vulgar acts that Christ chose to show forth the highest spiritual truths, and which have become the chief ceremonials of the church. Baptism is symbolic washing; the washing of the body to represent the purification of the heart. The communion service is symbolic eating and drinking; to represent our daily dependence on God for our spiritual as well as our material food. These acts that God hath cleansed let not man call common or unclean.

Whether Christ intended eating the bread and drinking the fruit of the vine, and washing of the disciples' feet to be ritualistic practices of the future church is a point on which doctors disagree, and which therefore it would be unbecoming, even unsafe, for a layman to discuss. It is of no practical importance, anyway, or Christ would have been explicit. What he evidently did mean is very generally overlooked—to make every meal a memorial. It was a consecration, not of the particular food eaten by the twelve, or that officially blessed in church, but of all food partaken of by his followers. "For as often as ye eat this bread and drink this cup"—that is, whenever we partake of the articles of daily diet—"ye do show forth the Lord's death."

Whenever we eat we are to remember that we receive from the same source our spiritual nourishment. There is nothing peculiarly sacred about bread and wine. They might have been potatoes and tea if these had been known then in Palestine. "Whether, therefore, ye eat or drink, or whatever ye do, do all to the glory of God."

Sacred days, sacred places, sacred words, are easy to get and keep. What we have not but ought to have is a sacred everyday life. Let us not keep our religious life separate from our ordinary life. Let us mix them. We are not, indeed, always in the same mood; sometimes we are sad, sometimes gay; sometimes serious, sometimes frivolous. But these moods are not irreligious, and we need never part company with religion in them. We are not always inclined to ponder upon the deeper problems of life and destiny, nor is it desirable that we should be; this is not the whole of religion. But we should not go where we cannot take God with us; nor do anything upon which we cannot ask his blessing.

We may ask God's blessing upon the gayest feast. Charles Lamb said he felt more inclined to give thanks when he opened a new book than when he sat down at the table. He would be quite right in doing so. There is a story told of a Puritan divine who asked a blessing and returned thanks before and after receiving the first kiss from his sweetheart. If that strikes us as ludicrous the fault is with us, not with the divine. If a man cannot combine his religion and his love-making, it indicates that the one or the other is of the wrong kind.

We are not purely physical nor spiritual, but a compound of both, and we must submit to our conditions. Browning in a beautiful simile, too long to quote, represents man as a swimmer immersed in the water and supported by it—as we are supported by the material world—but he can get his head up into a purer and finer atmosphere to breathe. As soon, however, as he struggles to leave the water, he sinks beneath the surface instead. So, in order to breathe the air, he must remain in the water.

We must learn to use both the spiritual and the material, to see the divine meaning in nature. We need greater faith in God; not a distant God, distant in time or in space, but a God who is not far from any one of us; for in him we live and move and have our being, apart from whom we are literally nothing. We must believe in the Immanent God, great enough to hold the world in its orbit, and great enough to teach the tadpole how to swim; a God who does not keep himself apart from this world which we call bad, but which he created and called good. We need the faith that sees God, not only in the miraculous, but in the commonplace; in the rain and the dew as well as in the thunder and the whirlwind; which sees "every common bush afire with God."

So many people have tried their hand at a definition of religion, that I also will attempt it. Religion is the perpetual realization of God; the spiritualization of daily life.

Christ would not pray that his disciples be taken from the world, but that they might be sanctified in the

world, working each at daily, trivial tasks, to the end that his kingdom should come and his will be done on earth as it is in heaven: aiming to make

> Our common daily life divine,
> And every land a Palestine.

THE CHURCH AS A PROMOTER

Whereunto shall I liken the kingdom of God? It is like leaven, which a woman took and hid in three measures of meal, till the whole was leavened.—Luke 13:20-21.

THE complaint is often made that the work of the church is being taken from it by the state and kindred organizations. The statement has some justification; the complaint has none. One of the functions of the church is to discover new duties, to develop new and startling extensions of old ethical principles, to apply them, and to teach them to the world as a whole.

In business circles the man who fills this office is called the promoter. He is a man well endowed with the commercial imagination, who has a deeper insight into conditions and possibilities, who discovers new openings in business, who starts new enterprises, demonstrates their practicability, and places them on a sound financial basis.

What the promoter is in the business world the church is in the ethical world. It has been and should always be the pioneer, the innovator. By the church aggressive I mean, of course, that minority, that very small minority, which, led by religious zeal, undertakes tasks which seem to the world foolishness—for the first few hundred years. That any person should devote his life to the care of the sick and the permanently disabled; that buildings should be erected where the blind, the deaf, and the insane are housed and well treated;

that defenseless women and children should be given a protecting refuge; that the criminal should find sanctuary; all these appeared very strange and vain proceedings when they were novelties. Now every civilized state provides for them on an elaborate and expensive scale as part of its ordinary duties. Asylums and hospitals, reformatories and humane prisons, all such were started by a few men of aspiration and inspiration in the face of ridicule and contempt, but are now maintained as a matter of course by ordinary men with no higher ideals than the average. Numerous fraternal and benevolent societies, sometimes composed and controlled by men who are not at all religious, are doing very efficiently the kind of work which was once confined to persons of exceptionally altruistic nature. The church is not designed to do all the good work of the world, but merely to show how it should be done, and the more it can get out of those not in sympathy with its newer and higher ideals the better. The greatest captains of war and industry have been those who could get others to do most of what they wanted done.

It is not only in religious matters that the church has been the leader. The world laughed at the church for centuries because it hoarded books and wasted the time of those devoted to its service in copying and studying the writings of the Greeks and the Romans. Instead of cultivating the ancient and honorable profession of fighting, these deluded creatures illuminated manuscripts, painted walls and composed music. But finally when the time came, art, drama, music, and architecture burst from the monastic cell as a butterfly from its chrysalis, spreading its beautiful wings in the open.

Schools and colleges are now supported by all the people. Everybody, whether fond of reading or not, recognizes the usefulness of printing presses and libraries. Once it was only the fanatical missionary who took any interest in anthropology, who noted the language of barbarous races, observed their customs and preserved their primitive mythology. Now we have bureaus of ethnology and societies devoted to the study of folklore. It was the church which first recorded and regulated marriage; now it is done by the state. Even our form of representative government, with its unique harmonizing of unity and adaptability, is a gift from canon law to civil law. The idea of internationalism, the conception of the brotherhood of all men, was a religious innovation, which now many secular agencies are striving to put into effect. Most of the arts and several of the sciences had their origin in religion, though both arts and sciences are apt to forget their ancestry.

The church has often fiercely objected to this taking over by other organizations of its peculiar functions just when they become most profitable and fashionable, but this protest was wrong and useless as well. Ideas cannot be patented, and no form of trust can monopolize good deeds. The church must not object to rivals, nor expend much energy in getting credit for what it has done, but must go on conquering new fields, and so prove its reason for existence.

For the church as a leader there is more demand than ever before; for the church as a follower there is no vacancy. As a duplicator, as a drag, the church looks sadly out of place; but a church with imagination,

with ideals, will make its own place. The moral world is not finite; there are always new lands, new continents, to discover. The world will not listen to a church which has only platitudes to teach; truths which everybody accepts, however little they may be practiced. When the world on the whole approves of what the church is doing it is a sign that the world has caught up with the church and it is time for the church to take a step in advance.

As it may shock some, who have not thought about the matter, to have it suggested that there can be any progress in ethics, and that the highest morality does not consist in following conventional precepts and practices but sometimes involves a departure from the *mores*, from the mode and manner of the time, I will quote a passage from *The Alchemy of Thought*, by Dr. L. P. Jacks, Principal of Manchester College, Oxford, and editor of the *Hibbert Journal*, for it contains the best elucidation of this point that I have ever read:

> We are apt to believe that great good will be done by inculcating the precept "Imitate the Good Samaritan." That some good will be done by the mere repetition of this precept at appropriate times and by duly qualified persons need not be doubted; at the same time it is equally certain that much harm will be done by exaggerating the good which this precept can do. Nothing, in fact, could better illustrate the limitations of fatuous morality and the dangers of forgetting them. For *how* are we to imitate the Good Samaritan, and what would imitation of him really involve? The splendid thing about the Good Samaritan was that he refused to imitate anybody. Had his morality been of the imitative order he would have done after the

manner of the Priest and the Levite, who were actually following approved exemplars of their time and place. So long, indeed, as our deeds of charity are mere imitations of somebody else, no matter of whom, the principle of our conduct is far nearer to that of the Priest and the Levite than to that of the Good Samaritan. When he showed mercy on the wounded man he was not imitating another Good Samaritan who had done the same thing on a previous occasion; nor was he remembering some precept which had been drilled into him by the masters of his youth or the pastors of his manhood. He was the first. His action, far from giving effect to any fixed rule that might have been taught him by contemporary moralists, was a flat violation of the respectable moral opinion of that time and place. A person who assists a wounded man today and thinks he is thereby imitating the Good Samaritan is therefore making a mistake, which, though it may flatter his self-conceit, vitiates his moral judgment. To do this act for the first time, in defiance of the accepted traditions of your race, is one thing; to do it for the ten thousandth time with the felt approval of the world at your back, is another thing. In no relevant sense is the second an imitation of the first. All the "subjective" factors of the two situations are different. Our pleasant consciousness that this kind of conduct has been sanctioned by the highest authority, ratified by the moral judgment of ages, celebrated in art, proved sound in principle by science, and commended by the most illustrious philosophers—need it be said that of all this there was no faintest glimmer in the mind of the Good Samaritan? In place of it there was, I suspect, an uncomfortable feeling that if his best friends saw that he was after they would cut him forever.

How, then, can we imitate the Good Samaritan? We imitate him, not by reproducing his act, but by being just

as original, just as creative, just as indifferent towards fatuous morality as he was.

If rules for imitating the Good Samaritan are to be framed and "taught" by way of moral education either to children or adults, these rules must take the form of telling us how to be morally original. And this, it will be admitted, is impossible.

The point is sufficiently important to deserve a second illustration from the same source. Were one asked to describe the most odious form of hypocrisy conceivable, we should surely point to the man who deliberately reproduces the part of the Publican in the parable and deliberately abjures that of the Pharisee—the man who says inwardly, "I thank thee, O God, that I am not as yonder Pharisee. I don't fast twice a week; I don't give tithes of all I possess, but duly, and at the proper time, I smite upon my breast and cry, 'God be merciful to me, a sinner.' The splendid thing about the Publican—and here he resembles the Good Samaritan—was that he smote upon his breast *before any authority had laid it down that this was the correct thing for a man in his position to do.* Surely we are well advised in not imitating the Publican; even fatuous morality would shrink from such advice, though what other advice it *can* give is hard to say.

The problem of the church is the same as that of a government, that is, how to secure minority rights without surrendering majority rule. Progress comes only through minorities. Whenever a new idea comes into the world it has a majority of 1,750,000,000 against it, for a new idea comes into the mind of one man first. If they are actively hostile or inertly indifferent the new idea is crushed out or dies out before it gets a start. To follow Pope's rule,

> Be not the first by whom the new are tried,
> Nor yet the last to lay the old aside,

would absolutely put a stop to all progress.

Yet ninety-nine per cent of all the new ideas that come into the head of the wisest man are wrong and deserve to die in infancy. The question is to find out which one is fit to survive. The majority is always wrong in regard to the one particular minority that holds the better view, yet the majority is always right in regard to most of the various other and divergent views.

"New truths begin as heresies and end as superstitions," says Huxley, and that applies to science, politics, and religion equally. "New occasions teach new duties, time makes ancient good uncouth," says Lowell, so ethics must continually progress to keep up with the advance of the world. That does not mean the repudiation of former principles or the loss of earlier gains. Comparing a textbook on chemistry or biology today with one of fifty years ago, you would hardly think that they dealt with the same science. You might suppose that the slate had been wiped clean of all the old, but if you look more closely you will see that all the old facts have been incorporated in the new theories and that surprisingly few of the old statements have been found to be so false that they had to be discarded. Science grows like a snowball, englobing what has gone before.

Science is by definition established truth, yet it is continually undergoing disestablishment. Science is never so sure of itself as when it is changing its mind.

Scientists have two functions in the world; to conserve and to discover, to hold on to what has been gained and to reach out for something new. The two tasks fall naturally to men of different temperaments, the first to teachers and the second to investigators; rarely does a man excel equally in both.

The history of religion seems to me to resemble the history of science, both in its method of progress and in the two types of temperament. Happy is the church that can keep its priest and prophets within its fold and working with reasonable harmony for its advancement.

Some years ago, when I was on the editorial staff of the *Independent,* we asked our readers to vote on the question of who were the greatest living Americans, who were the most valuable men among our contemporaries, the real leaders of the nation? In canvassing the ballots I was surprised to find that out of more than a thousand votes, widely scattered among many nominees, there were only three clergymen named, and these had very few votes, although the subscribers of the periodical were mostly church members. I think it safe to say that never at any time in the history of the country from the landing of the Pilgrims to the death of Phillips Brooks would a referendum of this sort have had such a result. This seems to indicate, so far as it goes, that the leaders of thought and action today are not found in the ministry so much as formerly.

Professor Van Tyne of the University of Michigan has for years been delving into the origin of the American Revolution and he finds it chiefly in the nonconformist churches. Seventy-five per cent of the pa-

triots who attained distinction enough to leave biographical data were Congregationalists and Presbyterians. The sentiments and phrases that were embodied in the resolutions and speeches of the revolutionists were, he finds, taken directly from sermons. Where did Patrick Henry get his radical opinions and fiery language? Why, from his pastor. The outburst of anti-monarchical sentiment, the challenge of the divine right of kings, the assertion of the natural right of the people to govern themselves, the language and ideas that so astonished the ruling classes of England, were familiar folk-phrases to the Americans. The revolution consisted mostly in carrying into effect what they had been taught from the pulpit.

Now, we may safely assume that some other revolution is at the present time in the process of incubation, some movement that will change the course of our history as much as did the separation from the English crown, though I would not presume to say what it will be, or even guess whether it will be in the field of politics, industry, social life, economics, education, ethics, or religion. But what I want to know is whether the historian who writes about that revolution in the future will be able to find it forecast in the sermons of today. Will he find that the preachers of the present were the prophets of the better order of things which we trust will be the outcome of the next great change, whatever it may be? Will their pulpit utterances become the slogans of the coming reformation?

In the intellectual crisis of the present, which comes from the sudden influx of novel and unassimilated facts and theories from scientific research, we are not getting

the help that we have a right to expect from those who now occupy our pulpits, and I fear that we shall get still less from their successors. For, either from lack of taste or from defect of training, the graduates from our best theological seminaries do not seem to be concerned with such questions. The theological students I meet nowadays are good fellows, earnest, energetic, devout, ambitious, and liberal-minded. They seem to be smartly up-to-date and keenly alive on all topics but one, and that is theology. Most of them do not seem to have any or any interest in any. By theology I do not mean a particular system of dogmatic doctrine but rather the habit of thinking about the fundamentals of faith and reason, about the metaphysics that lie at the base of physics, the psychology that controls character and motivation, the personal philosophy that is the compass of conduct. It is the schools of science, not the schools of theology, that are turning out the thinkers in such fields.

We are in the midst of the greatest revolution of thought that the world has ever seen, the Einstein theory of relativity, the Planck theory of quanta, the chromosome theory of heredity, the hormone theory of temperament, the new knowledge of the constitution of the universe and of the workings of the human mind. These ideas will influence the philosophy, theology, religion, and morals of the future as much as the Copernican theory influenced those of the sixteenth century, and the Darwinian theory, of the nineteenth. Such questions would have aroused the keenest interest in the minds of men like Edwards, Berkeley, Calvin, Aquinas, Augustine, or Paul. They would have

delighted to work out their ethical implications. A student of engineering or biology will sit up half the night discussing these theories, and their application to life, but your modern theological graduate is bored by them. He has learned how to give the glad hand to the strangers at the church door and can teach Boy Scouts how they should salute the flag—things that a pump-handle or drill-sergeant could do as well—but he is not qualified to lead his people through the mazes of modern thought. Since sermons have become sociological instead of philosophical, serious-minded people are going elsewhere to get their metaphysics and often getting a poor brand of it from unqualified dispensers. When a young preacher does touch upon such topics—which fortunately is seldom—he is apt to reveal a materialistic conception of matter that sounds amusingly antiquated to his scientific hearers.

The Committee of Inquiry on "The Teaching Office of the Church" appointed by the Archbishops of the Church of England, admitting "the failure of the church to obtain a hearing for its message," ascribed it primarily to the fault of the theological teaching. The Committee on Evangelistic Work reported that "if the Church is to preach to this generation an evangel that will grip, it must come in some real sense as 'news'; news powerful enough to change the whole mental and spiritual outlook."

If the church is to be anything more than the Boosters' Club of Zenith City there has got to be some hard thinking done by those at the head of it during the next twenty years. Somebody has got to seize hold of these new conceptions and point out their moral applica-

tions. Otherwise somebody else will make immoral applications of them. Unless the preacher gets accustomed to deep diving while he is young, he is apt to swim shallower and shallower as he gets on in life. Unless he has once thought things through for himself he will be at the mercy of every passing fad that blows. Theological schools ought to teach theology.

Eloquence of tongue and charm of manner will not compensate for want of thought. In time any congregation will tire of a diet exclusively of boneless sermons stewed in cream.

The living church must have its school of prophets as well as its caste of priests; its innovators as well as its conservators. Among the ancient Hebrews priest and prophet were quite distinct, and indeed often at odds. The modern minister is expected to combine the two functions, which is difficult if not impossible, for they require different types of temperament. The priest is the official guardian of the established church. He conducts its ceremonies, manages its finances, maintains its traditions. It is his duty to transmit to each successive generation the winnowed wisdom of the fathers, to see that no accent of the Holy Ghost is lost by this heedless world.

The prophet is a man of different character and other duty. It is his task to arouse the people against unsuspected sins, to sting them from their apathy and prevent formalism from putting the church to sleep, to apply the eternal principles of righteousness to present crises, to point out the consequences of prevailing or proposed policies, and raise new standards of ethics. He is the radical, the agitator, the nonconformist, the

iconoclast. He does not appeal to tradition; he does not rely upon the law or cite precedent. He speaks as one having authority, and not as the scribes. But although he may denounce the established church of his time as an obstacle to progress, yet he builds upon it for the foundation of his new order and must in turn establish some institution of the sort to make his message a permanent power in the world.

We find a similar differentiation of function in other fields: in politics, where we find the spellbinder, who is sent around the country in the campaign, and the district leader, who knows his ward man by man and keeps the machine running between campaigns; in science, where the original genius absorbed in research must be supplemented by the teacher who is as much interested in his students as he is in his subject.

In the modern Protestant churches the two functions and types are distinguished, rather imperfectly, by the terms pastor and preacher. The priest, or pastor, should be a man who is esteemed and loved by all. He should be the guide, philosopher, and friend of young and old. It is more important that his judgment should be sound than that his ideas should be original. It is not necessary, and perhaps not desirable, that he be a genius, unless a genius in common sense and friendliness. We go to his study, not to have epigrammatic eloquence fired at us, but to receive commonplace consolation for our commonplace sorrows and commonplace correction for our commonplace sins. He must be preëminently a practical man, able to manage the business affairs of the church. He must conduct the services of the church with a dignity and propriety all

the more required where the ritual is simple and flexible. He must know his people, their home life, their business life, their spiritual life. He must have the ability of a general or captain of industry to be able to set each man and especially each woman where he or she can do the most good.

The prophet, or preacher, may be lacking in some or all these virtues and yet be capable of doing a great work in the world. It is a pity for a man of eloquence and insight to be put out of the pulpit because his books do not balance or he cannot remember whether the Smith child is a boy or girl. There are so many people in the world who can balance books and remember the names of the Smith children, and so few who can inspire and stimulate us. The preacher of the Prophetic type must make bitter enemies as well as devoted disciples, as he handles live issues without gloves. He is apt to be touchy and temperamental. Carlyle was a typical prophet and he was, on the best authority, "gey ill to live wi'." And no matter how great his genius, the preacher cannot be relied upon to turn out annually fifty-two or one hundred and four sermons of equal originality and eloquence. Four new ones a year is as much as we have a right to expect from any man.

For that reason it is not fair to confine the great preacher to one pulpit, even in a city where he preaches to a procession. To get the best out of both the pastors should be permanent and the preachers peripatetic. Perhaps the radio will prove to be the solution to this old problem. By this means we may listen to the best preachers of any denomination, or of none, either individually or collectively, while the local pastor stops

trying to compete with them and confines himself to the ministry of his flock.

The fault I have to find with the preachers is that they are too unselfish and self-effacing. The modern minister is willing to sacrifice to the desires of others, not only himself, but the best interests of his church. He will allow "the enrichment of the service" to the point of intellectual impoverishment. He may still sit upon the platform but can hardly be said to occupy the pulpit. He does not even get as much of a chance to talk as a toastmaster at a banquet. And if the choir wants to display a special anthem he will obligingly cut down his sermon from twenty to thirteen and a half minutes, or omit it altogether.

He will surrender his best chance at systematic instruction, the adult Bible class, to a fluent realtor, lawyer, or storekeeper, who has no training in what he undertakes to teach. Now a devout layman of this sort may be able to contribute mightily to the education of the congregation by the lessons in practical ethics that he has derived from his observation and experience in the world of affairs, but it must make a minister miserable to hear him misinterpret Scripture, misrepresent historical circumstances, and misconstrue theological questions that have been studied for centuries.

People think they are cheated unless a lecturer gives them at least an hour and a quarter. A university professor has fifty-five minutes to devote to the elucidation of a single point. The preacher, who has more intricate and more vital themes to expound and impress, should have at least as long. It is a practical impossibility to explain and develop a subject in its proper pro-

portions in a quarter of an hour. In the days when sermons were a power in the life of our people the preacher measured his remarks by an hourglass on the pulpit, and turned it over if he found he needed more time to do justice to his topic and his congregation.

The consequence of this relinquishment by the modern preacher of the essential part of his job is that most grown-up Christians nowadays have no grown-up religion. The childish ideas and forms that they learned —perhaps—in the home or Sunday School are not adequate to meet the intellectual difficulties and moral temptations of after life. Naturally they come to think that there is nothing to religion more than what they were taught in childhood.

I call the educational the essential part of the preacher's job, because he is the only person in the church who is qualified and trained to do it. Other members of the congregation can visit newcomers and even console the sick. Theological training is not necessary to manage the organization and finances. Any layman can baptize in an emergency. A justice of the peace can marry. But probably there is no one in the church who knows so much about the Bible, the history of the church, the principles of theology and the applications of ethics. There is no use having an educated minister if you do not make use of his education.

The practice or legal requirement of reading passages of the Bible in the schools without comment is supposed by some of its advocates and opponents to be a Puritanical custom. On the contrary it would have shocked the Puritans, who required their ministers to

expound the chapter section by section as they read. "This form of Scripture-reading was deemed the only fitting method by the New England pastors, 'dumb-reading,' or reading without comment, being supposed to savor of the liturgical usages from which they had fled." [1] If a minister does not give this aid in the understanding of the Biblical lesson we might as well have a phonograph in the pulpit.

In comparing the pictures of New York City as it was fifty years ago with the New York of to-day the most striking difference is in the sky-line. Then the homes and buildings were all low, only a few stories, and the most prominent edifices were the churches, which raised their spires high above all the rest. Nowadays in a view of the city the churches are almost out of sight, hidden away as they are between and behind the office skyscrapers and apartment houses. A stranger judging by this picture would say that the churches had sunk into insignificance.

But that would be wrong. The churches are there, more of them than ever, larger than ever, busier than ever; only they are less conspicuous. They have no longer the monopoly of the heavenward impulse. They no longer dominate the city, and they may more easily be overlooked.

The problem of the church is how to make the best of the situation and how to maintain religion as a vital factor in modern life when it has ceased to be the most prominent. This is not necessarily an unfavorable condition of affairs for religious progress. When we

[1] Williston Walker, *History of the Congregational Churches in the United States*, p. 238.

look back over the history of Christianity we find most to regret and apologize for in the times when the church occupied a commanding position and brooked no rivalry, while the periods when the pure spirit of Christianity was most manifest were those in which the church was relatively less conspicuous. The church does not now suffer from any form of persecution, nor does it offer such worldly advantages as to draw to it the selfish and ambitious. Freed, then, on the one hand from dangers of malice and envy and on the other from the greater danger of becoming the tool of secular powers, it has the opportunity of developing in accordance with its own inner ideals and of achieving its own peculiar aims.

Since the church has been largely relieved of the educational and eleemosynary burdens, which it formerly had to bear alone, it may again become the pioneer, pressing forward into unexplored territory and gaining higher ground. If the church is crowded out from its previous occupations, there is always room at the top.

PAINTING THE PICTURE OF GOD

No man hath seen God at any time. If we love one another, God dwelleth in us . . . Whosoever shall confess that Jesus is the Son of God, God dwelleth in him, and he in God.—John 4:12, 15.

ONCE a little girl was observed sitting on the floor furiously drawing a picture with colored crayons on a big sheet of cardboard. Her mother asked her: "What are you doing?"

The little girl answered: "I am drawing a picture of God."

The shocked mother remonstrated: "But nobody knows how God looks."

The little girl wet her crayon in her mouth and dashed it again at the paper as she replied: "They will when I get through."

Here as usual the child reflects in miniature the childhood of the race. The prehistoric cave-dweller, who daubed his deity on the rough rock walls in charcoal and red ocher, had the same confidence in his ability to portray the unseen object of his adoration and got much the same result.

And all through the centuries since, men have never ceased in their efforts to depict and describe their ideas of divinity, to confine infinitude in the finite form. Looking back over the pictorial evolution of theology we should discern in the background the African fetish; the meteorite fallen from heaven and the fulgurite formed by the thunderbolt; the Egyptian dung beetle

and cat-headed goddess; Phœnician Baal and Astarte, divinities of cruelty and lust; Hindu Kali with her necklace of human skulls and Siva with his obscene emblems; Buddha of the lotus flower and Allah of the sword; the many-breasted Diana of the Ephesians and Briareus of the hundred arms; the human, all too human, gods of the Greeks and Romans; the paternal and maternal elements of the Christian iconography; the abstractions of the metaphysicians, the ineffable visions of the mystics, the mathematical formulæ of the men of science.

This composite picture, as we decipher it from the palimpsest of the past, reminds us of the sketches that we see in the museum, where the artist has retained every pencil mark that he has made from the first vague outlines to the finishing touches, each limb surrounded with a haze of false drawing, of strokes astray; but out of them has gradually emerged the final form. So man works over the canvas on which he is drawing the picture of God, all races, generation after generation, adding new lines, erasing wrong lines, here a little, there a little, revising, rectifying, improving as his vision clears and his ideal develops. It is "the method of trial and error," by which the artist, the scientist, and the theologian gradually approach the truth.

Nobody knows how God looks now. But they will when we get through. If not the human race will have been frustrated in its highest aspiration.

The history of religion is an incessant struggle between iconoplasm and iconoclasm, the alternate making and breaking of images of God. Each may be in its turn a step in advance. For in all forms of human

progress it is sometimes necessary to demolish the old in order to erect the new in its place. An inferior idea of God is often an impediment to the establishment of a purer conception. Materialism is always an obstacle to idealism.

The most dramatic scene in this age-long warfare of the newer and higher ideal of divinity with the established one was that which took place on the slopes of Mount Sinai. After Moses had gone up into the mountain in search of a new revelation of God the children of Israel, in despair of his return, went to his brother Aaron and asked him to make them an image of the God who had brought them up out of the land of Egypt. And Aaron did the best he knew to satisfy their natural longing for an object of worship. He did what many another religious leader has done, yes, is doing even now; for, not having the prophetic foresight, he turned to the past for his inspiration. He melted up their golden earrings and made them a calf after the model of Apis. Also following the religious precedent of their times, the people worshiped by feasting, drinking, and dancing naked before their idol.

In the midst of this orgy Moses appeared on the mountain-side bearing in his arms a new manifestation of deity, no golden bull, no image of any kind, but a plain tablet of stone on which was inscribed a pure ethical code, the ten commandments, the first two of which prohibited the form of worship which was being practiced in the valley before him.

In the first encounter, as is common in a conflict between the new and the old in religion, the old won. The tables of stone were smashed. But, as is also usu-

ally the case, the victory later turned toward the new. Moses ground and burnt the molten calf and made the children of Israel swallow it. Then he went back up the mountain and got another copy of the ten commandments inscribed upon the stone. God is very patient. Often as we break his commandments he writes them over again, word for word the same. However we may caricature him in our representations, he unweariedly continues to present to us the perfect model for our imitation.

The second edition of the ten commandments became the accepted code of the Israelites and has descended through them to us. The second of the commandments, forbidding the artists to meddle with theology, freed the chosen people from danger of degeneration of their ideal of deity through attempts at its materialization.

Some historians attempt to explain the comparative purity of Semitic religions by saying that the Semites had a natural genius for monotheism. This is nonsense. Those Semitic peoples which did allow idols had as bad religions as anybody. Judaism and Mohammedanism remained pure because they kept literally the law against images of any kind. The Jews, like everybody else, have a natural tendency to relapse into earlier and inferior forms of religion. Their history in the Old Testament records a constant struggle against reversion to idolatry, and being deprived of idolatrous objects of worship by the law, they have regarded the book of the law itself with a reverence sometimes approaching adoration.

We are no longer in danger of a relapse into idola-

try of the older sort, but still the artist has to be watched, for he has still power to pervert pure religion. The rise of art often means the decline of devotion. It is the sculptural and pictorial forms of art that are most dangerous to religion because of their inveterate tendency toward a crude anthropomorphism. The architectural and musical forms of art are free from this and only become injurious when they absorb and distract attention from the religion that they are designed to serve. Excessive devotion to the art side of religion is apt to lead to luxury, exclusiveness, and sensuousness. It makes religion a matter of pleasurable emotion instead of dutiful action. It substitutes feeling for doing. It exalts esthetics and subordinates ethics.

In the early stages of religion art may be an aid, but in later degrees of development art is apt to become its enemy. The Greeks could not rise to the heights of stoicism because their artists were too clever. Statuary and poetry constantly recalled them to the crude conceptions and low morality of their primitive mythology. Plato recognized this impediment to the higher life of his people and so refused to admit to his ideal Republic the works of Homer, Hesiod, and Æschylus because they gave false and degrading pictures of God.

Lucretius, who wrote his poem "On the Nature of Things" to abolish belief in all gods from the mind of mankind, begins it with a hymn to Venus. The painters of the Renaissance made their mistresses the objects of adoration to the ignorant multitude by using them as models for their madonnas. Savonarola protested at the time against the custom of the Florentine

artists of painting pictures of the Virgin in the alluring guise and well-known features of prostitutes.

The founders of religions have been men of such insight that they were able to see the reality behind appearances, the eternal in the ephemeral. Their followers, lacking their vision, have endeavored to represent the spiritual conceptions of their master through the symbolism of metaphors and pictures. To do this they must call to their aid the artists, who as a class are men deficient in imagination, and who, being congenitally incapable of perceiving the inner meaning of things, have in compensation acquired dexterity in depicting their superficial aspects. They concern themselves with form and color, the accidental and temporal appearances of objects, and disregard their permanent principle and purpose. In fact artists of the modern school boldly avow that their pictures have no message or meaning whatever and are to be looked upon purely as combinations of shades and tints on flat canvas. They have deliberately aimed at divesting their pictures of all intellectual and spiritual content, and have been remarkaby successful in achieving their aim.

Then, too, artists are naturally materialistic and conservative. Matter is their medium and their appeal is to the senses. Their ears are deaf to the music of the spheres and they hear only air vibration of a frequency between 16 and 40,000 per second. Music is the least intellectual and most sensuous of the arts. It is incapable of conveying an idea unaided and yet is powerful in arousing emotion. Therefore it is capable of carrying and enforcing the ideas imposed upon it by words, suggestion, or association. Music is what is

called in radio the "carrier wave." Graphic and glyptic art is conservative because it uses the familiar forms of the past. Painters and sculptors have their eyes turned backwards, and it is very difficult to get them to comprehend and present the conceptions of the present and the ideals of the future. A false and traditional way of drawing the human figure, eyes front, face profile, trunk front and feet side view, was maintained for thousands of years throughout the history of Egyptian art. Artists drew the galloping horse in an impossible attitude for thirty-seven centuries, from the Mycenæan period down to thirty-five years ago, when the motion-picture photographer set them right.[1] The architects give us public buildings that fit us about as well as the hermit crab his shell. For instance, their idea of a bank building is a Greek temple, although the Greeks detested banking. If an artist wants to symbolize modern warfare he paints a sword, if he wants to symbolize literature he paints a plume, although these are not the implements now used in fighting and writing, and are mostly meaningless to us.

These obvious observations should not be construed as a condemnation of art or a criticism of artists. They could not change their natural temperament without ceasing to be artists. But it is necessary to see the limitations of art to understand why it has been so often a drag upon religion and why religious reformers, such as Moses, Zoroaster, Plato, Mohammed, and the Puritans, have viewed it with suspicion as likely to pervert spiritual ideals in the portrayal of them.

[1] Sir Edwin Ray Lankester, *Science from an Easy Chair,* Second Series, p. 52.

We give different meanings to the same word according to our temperament and disposition. Take, for instance, electricity. To the scientist electricity is E=IR. To the practical man electricity is the radio and the dynamo. To the artist electricity is a beautiful woman flying through the clouds with a wire in her hand. All three conceptions are perfectly proper in their places. No one of them tells what electricity really is, or comprises all it means to the modern world, but of the three there is no doubt that either the conception of the electrician, who regards it as a mathematical relation, or that of the practical man, who thinks only of what it does, is more adequate than that of the artist, and if we should allow allegorical figures to take the place of mathematical formulæ in science it would fall as low as ever religion did in its most debased period.

The desire for a pictorial representation of an abstract idea or a spiritual concept is due to lack of imagination. A person of good taste would rather have no picture of his mother than one of these "crayon portraits" that are thrown in when you buy the frame. So, too, any one endowed with spiritual insight feels a repugnance at the sight of any portrait of God, for even one by the best of painters is rather a hindrance than an aid to devotion.

Pictures of Jesus may give us a more realistic idea of his life and times, and so aid us in the interpretation of his teachings. But generally the aim of the artist is not historic accuracy but more or less symbolic representation. Then, too, the points selected for emphasis are necessarily the less essential elements and therefore tend to distract attention from the important

lessons. The larger proportion of the pictures of Jesus present him at his birth and death, but Jesus as a babe in arms or tortured on the cross gives us no idea of the gospel taught by Jesus as a man.

A good example, or rather a bad one, of what the artist does to theology when he has a free hand is one of the most recent pictures of God in one of the finest of our public buildings by one of the greatest of American painters, Sargent, in the Boston Public Library. Here the dogma of the Trinity is represented by three ugly men wearing a single suit of clothes. Whatever conception we may get from the Gospels of the personality of Jesus, certainly the least unlike is a Byzantine king with a gilded plaque around his head, holding up his fingers to symbolize a doctrine, as though he were a deaf and dumb man. The only "proof text" I can think of giving any ground for depicting him as a Byzantine king is the parable of the unjust judge. If this conveys any idea at all it is a wrong idea. The real meaning of the second commandment is "Thou shalt not bear false witness against thy God."

Possibly all the pictures of God that have been made since the world began, horrible or grotesque as some of them seem to us, had in their prime conception some sincere religious motive. Perhaps we might go so far as to say that they conveyed in the language of their time an idea of some real aspect of the manifold manifestations of divinity. The savage makes his mumbo-jumbo so hideous and cruel that he is almost frightened at it himself, still more his tribe who have not seen the image in the making. But the fear of the Lord is the beginning of knowledge, for out of fear grows awe, and

out of awe reverence, and out of reverence devotion.

Two things we should do in regard to all the ancient idols, whether Baal the cannibal or Balder the beautiful: we should recognize their intent and therefore appreciate them; we should recognize their inadequacy and therefore reject them. He who overthrows an idol is more pious than he who erected it, provided he has a better image ready to put in the emptied niche.

The first sculptor who put wings on the statue of his god—I do not know if he were an Egyptian or a Babylonian—meant well, and perhaps did well at the time, though the harm he did lasts to this day. His theology was better than his anatomy. At any rate he was wiser than the other artists of his time who put the head of a dog on the body of a man. He made angels a little higher than man, and in so far he was right. Doubtless there were some standing about to criticize that no one would have ever seen a man fly. To which the artist retorted, by his statue if not by his voice: "Never mind. Men ought to be able to fly and sometime they will." He was right and those of little faith were wrong. On the wings of the airplane men have risen to the level of the ancient gods who differed from man only in having the power of flight. But the aviator, now we have him, does not appear to us an angel. Sometimes indeed quite the opposite, as when he sails over a city and rains down fire and brimstone on the just and unjust alike.

Probably the first airmen who dropped into an African oasis or sailed over the Afghan mountains were adored as divine. But why do we not hold the aviator to be a god? Simply because our conception of deity

has risen faster than the flight of man. The abode of the gods was once placed on Mount Olympus, which was less than ten thousand feet high. Modern airmen have gone up three times as far, but found heaven still above them. The thoughts of men have widened with the process of the sun.

The other day I stood before a modern painting of an angel, a gorgeous creature with wings that outshone the peacock. An eminent scientist came up and looked at it too; finally he said: "How can we expect our young people to come into the church when it implies believing in such anatomical monstrosities as that!" Here is the curious case of an unknown heathen artist who lived some ten thousand years ago blocking the door to a modern American church in the twentieth century. Such a winged man is as unbiblical as it is unbiological. It is a conception foreign to both Christianity and Judaism. The angels whom Abraham and Lot entertained unaware [2] certainly did not wear wings, nor apparently did those who sat at the sepulcher of Jesus. When the angel of the Lord—or was it the Lord himself?—appeared under the oak of Ophrah and Gideon prepared a meal for him,[3] when Raphael hired out to guide Tobit to collect a debt and get a bride at Rages in Media,[4] they were obviously featherless bipeds. Angels of the sort invented by the artists of the Dark Ages would have created as much commotion in Palestine as did the one the Vicar shot down as told by Wells in *The Wonderful Visit*.

[2] Genesis 18 and 19.
[3] Judges 6:11-22.
[4] Tobit 5:5.

What gives the Bible its unique value and its incomparable position among the sacred books of the world is that it is not a single book but the long literature of a race, not the work of one author like the Koran, or the product of a particular period like the Rig Veda, but a collection of the best thought of the most devout of the Hebrews for some three thousand years. The Bible is a history of that process that some call the progressive revelation of God, and others, meaning much the same, the evolution of religion. We could not well spare any of its pages, even those that seem to have no message for us, for we should miss a link in the chain.

To those who read the Bible in its historical aspect, and not as a unified code of doctrine, its apparent inconsistencies cause no uneasiness. When we find that different ages held different ideals and deduced from them different conduct, we should endeavor to understand and do justice to them all, without trying to force a false consistency. The milestones of the highway are of value just because they are not in the same place. We must not misinterpret the Bible in defending it.

One of the most instructive lessons we get from the Bible is to observe the various pictures of God as we turn over its pages from Genesis to Revelation. Here is one of the early pictures:

> And while the children of Israel were in the wilderness, they found a man that gathered sticks upon the sabbath day.
>
> And they that found him gathering sticks brought him unto Moses and Aaron, and unto all the congregation.

And they put him in ward, because it was not declared what should be done to him.

And the Lord said unto Moses, The man shall be surely put to death; all the congregation shall stone him with stones without the camp.

And all the congregation brought him without the camp, and stoned him with stones, and he died; as the Lord commanded Moses.[5]

Contrast that with this picture of fifteen hundred years later:

And it came to pass, that he went through the cornfields on the sabbath day; and his disciples began, as they went, to pluck the ears of corn.

And the Pharisees said unto him, Behold, why do they on the sabbath day that which is not lawful?

And he said unto them, The sabbath was made for man, and not man for the sabbath:

Therefore the Son of man is Lord also of the sabbath.[6]

The priestly picture of God is very different from that of the prophets. Four of the five books of Moses are largely taken up with an elaborate system of injunctions and taboos, of sacrifices and sabbaths, and the most appalling penalties are threatened[7] by Jehovah upon any who may fail to follow the law and ritual in every detail to the end of time. Yet a few centuries later Isaiah, speaking in the name of the same Lord, uses very disrespectful language of these sabbaths and sacrifices:

[5] Numbers 15:32-36.
[6] Mark 2:23-24, 27-28.
[7] Deuteronomy 28:15-68.

"What care I for all your lavish sacrifices?"
the Eternal asks;
"I am sick of slaughtered rams,
of the fat from fatted beasts;
the blood of bullocks and of goats
is no delight to me.
Who asked that from you,
when you gather in my presence?
Crowd my courts no more,
bring offerings no more;
the smoke of sacrifice is vain,
I loathe it;
Your gatherings at the new moon and on sabbath,
I cannot abide them;
Your fasts and festivals,
my soul abhors them.
They are a weariness to me,
I am tired of them." [8]

The prophet Amos, too, reveals to us a God who cares nothing for ritualism and much for righteousness:

"Your sacred festivals? I hate them, scorn them;
your sacrifices? I will not smell their smoke;
You offer me your gifts? I will not take them;
you offer fatted cattle? I will not look at them.
No more of your hymns for me!
I will not listen to your lutes.
No, let justice well up like fresh water,
let honesty roll in full tide.

. . . . .

I know your countless crimes,
your manifold misdeeds—

[8] Isaiah 1:11-14 (Moffatt's version).

browbeating honest men, accepting bribes,
defrauding the poor of justice." [9]

Here is a picture of God as he was known in the time of Elisha:

And he went up from thence unto Bethel; and as he was going up by the way, there came forth little children out of the city, and mocked him, and said unto him, Go up, thou bald head; go up, thou bald head.

And he turned back, and looked on them, and cursed them in the name of the Lord. And there came forth two she bears out of the wood, and tare forty and two children of them.[10]

Compare that picture with this, some nine hundred years later:

Then said Jesus, Father, forgive them; for they know not what they do.[11]

Hear the prayer of David, "the man after God's own heart," asking vengeance upon his enemies:

"Grant that his children be fatherless,
And that his wife be a widow,
Up and down may his children go begging,
Expelled from their desolate home.
May all that he owneth be seized by the creditor;
May strangers plunder the fruits of his toil.
May none extend to him kindness,
Or pity his fatherless children." [12]

[9] Amos 5:21-24, 12 (Moffatt).
[10] II Kings 2:23-24.
[11] Luke 23:34.
[12] Psalm 109:9-12 (McFadyen's trans.).

And then listen to this:

But I say unto you, Love your enemies, bless them that curse you, do good to them that hate you, and pray for them which despitefully use you, and persecute you.[13]

I was talking today with a Y.M.C.A. secretary who had served with the American army in France and I asked: "What in your opinion was the real cause of the Great War?" The answer was: "The mistake of the early Christians of incorporating the Old Testament in the canon of Scriptures on a parity with the New. If they had treated it as the Council of Trent decided to treat the Apocrypha, to be read for edification, but not for the establishment of doctrine, the Christian Era would have been spared much bloodshed and persecution."

This is not so heretical a view as it may seem to some. In *The Church Militant* of the diocese of Washington for May, 1925, the Rev. Clarence W. Whitworth in planning a curriculum for church schools in the rural districts says:

You will notice that I have left no place for the Old Testament. This is not an accidental omission. I am profoundly convinced that the Old Testament is the source of most of our spiritual disasters. While it has undoubted spiritual value for the mature mind, it is so beset with difficulties and even absurdities that it is almost certain to create confusion and doubt. If it is handled at all, it must be handled honestly and fully with all the assured results of criticism and scientific research frankly dealt with. All

[13] Matthew 5:44.

this can be done only with a mature mind. As for using the "hero stories" of the Old Testament as a child's introduction to religion, I can imagine nothing more calculated to make heathen out of children, and their general use is doubtless why most of our children are heathen.

A little girl, reading her way for the first time through the Old Testament, was much shocked at striking some such passages as I have quoted. She took her perplexities to her father, a clergyman, who, without endeavoring to explain them away, turned her attention to passages of a different tenor in the New Testament. After reading these she came to her father much relieved in mind, and, climbing up into his lap, observed: "Papa, God grew better as he got older, didn't he?"

That is one way of looking at it, certainly. Another is that men got a clearer vision of Him in the course of time. The imperfections we discern in the Deity are due to defects in our own eyesight.

> Our little systems have their day;
> They have their day and cease to be;
> They are but broken lights of thee,
> And thou, O Lord, art more than they.[14]

No one need have his faith shaken by the fact that there are so many and so different pictures of God. None of them can be complete and correct. None of them is perhaps altogether false. Their diversity is not only evidence of the sincerity of the artists but also a proof of the reality of the object they depict.

[14] "In Memoriam."

The teacher of a drawing class will arrange his students in a ring and set a chair in the middle for them to sketch. Every picture is different, if it be true. The legs are of different length, the rungs have different angles, the seat has a different shape. If the teacher finds any two drawings just alike he knows that one of the students is a cheat or a liar. He either has copied from his neighbor or has drawn the chair from his imagination. He has not depicted truthfully what he actually saw but what he thinks he might have seen if he had sat somewhere else. No picture of the chair in all its aspects has ever been drawn or ever can be, for no man has ever so seen it or can see it. The real chair as a whole is invisible to mortal eyes, like all real things. Mortal eyes can see only the surface and only one side of that at a time.

So it is in theology. If all the pictures of God in the world were alike, we should have good ground for doubting the existence of God, for we should know that all the pictures were blind copies of one, and the man who made that one might have invented a fictitious being. But since men of the most diverse minds in all ages and in every land have professed to have had some sort of vision of God, and have tried in their various ways by pen or pencil to depict what they saw, we must believe that there is a reality behind all these representations. More than that, we can get quite a clear conception of that unknown God whom all men ignorantly worship if we diligently study the multiform pictures of him that have been drawn by the priests and prophets, saints and sages, mystics and philosophers, poets and artists, of the last six thousand years,

And, chiefly, its divinest trace,
In Him of Nazareth's holy face.

We can discern in them certain common traits by critically comparing and contrasting them, rejecting some as worthless or imitative, accepting others at full face value so far as they go. For we find that God cannot be completely portrayed in any canvas, any block of marble, any book. After all our labor we come to the conclusion that God is essentially ineffable and invisible and above all human comprehension. Can man by searching find out God? Yet the search is not in vain.

"No man hath seen God at any time."[15] Yet we are told in the same volume[16] that Moses, Aaron, Nadab, and Abihu, and seventy of the elders of Israel saw him at Horeb. Jacob named the place of his wrestling Peniel because, as he said, "I have seen God face to face, and yet I am alive!"[17] But when God spoke to Moses on Mount Sinai he said:[18] "Thou canst not see my face: for there shall no man see my face and live." So Moses was put in a cleft of the rock and covered with the hand of God till he had passed by. "And I will take away mine hand, and thou shalt see my back parts; but my face shall not be seen." Yet it was because Moses did not know how God looked that he was warned against iconographic representations:

[15] I John 4:12.
[16] Exodus 24:9-11.
[17] Genesis 32:30 (Moffatt's version).
[18] Exodus 33:20, 23.

You saw no shape on the day when the Eternal spoke to you out of the flames at Horeb; beware, then, of depraving yourselves by carving an idol in the shape of any statue, either male or female, or like any beast on earth, any bird that flies, any insect crawling on the ground, or any fish in the sea; beware of looking up to the sky and then, as you see the whole host of heaven, the sun and moon and stars, letting yourselves be allured to bend in worship of them. The Eternal your God has allotted them for worship to all nations under the broad sky, but the Eternal took you and lifted you from the iron furnace of Egypt, to be a people of his own, as it is today.[19]

Some say that the higher critics have gone too far. It seems to me that they have not gone far enough. We chemists regard analysis as merely the first step toward synthesis. We take compounds apart, not from idle curiosity to see what they are made of, but in order that we may put the parts together again in some new and better way. Children tear up books for the fun of it and leave the floor all littered with scraps of paper for somebody else to pick up. I don't begrudge the biblical critics their fun, but I do wish that somebody would pick up their tatters and put them together and make something out of them. Perhaps that is not their duty but the job of the theologian. But we seem to be short of theologians nowadays, although they were never more needed.

It is very ungrateful to find fault with the scholars who have devoted their lives to the elucidation of the Bible, toiling in the trenches under a tropical sun or moiling over manuscripts in a museum. We must ad-

[19] Deut. 4:15-20 (Moffatt's version).

mire the ingenuity with which they run down every little clew afforded by the forms of words or the style of writing. It is to their labors that we laymen owe the opportunity, that no previous generation ever enjoyed, of getting close to the meaning of the text through translations and of understanding its historic setting. But it does seem to me that by long concentration of their gaze upon the page they sometimes become a bit nearsighted. They are too modest in thir aims, too low in their ambitions. There is something higher than higher criticism.

To be specific in my criticism of the critics, they are too much absorbed in questions of authorship. From a scientific point of view this seems absurd because it makes no difference who wrote a thing if it is true, and if it is not true it matters still less.[20] If some censor should go through a chemical library and blot out the name of every chemist in every book, it would not make any material difference in the value of the volumes. It would merely bother us in looking up references. No chemical fact would be lost.

Religion is real, whoever wrote about it. The Christian experience is verifiable by any one who cares to try it. What we have learned about the ways of God, whether we have got it from inspiration or from investigation, whether we have obtained it secondhand from books written by fallible men or have derived it directly from God's own book of Nature, has become our per-

[20] The proof-reader queries this, but on reflection I will leave it as I wrote it. I mean that if what you are working on turns out to be wrong you not only get nothing but are out your labor; so its value is a minus quantity.

manent possession and may be substantiated at any time.

If a student browsing about the chemical library comes across something that he does not believe and takes it to the teacher, the teacher does not say, "Look at the name of the author and doubt it if you dare." No, he says, "Go into the laboratory and try it for yourself."

That is the scientific method, and that is the method of Jesus. "If any man will do his will, he shall know of the doctrine whether it be of God or whether I speak of myself." John sent two of his disciples to Jesus to ask if he were the Christ: "Then Jesus answering said unto them, Go your way, and tell John what things ye have seen and heard." [21] It was the pragmatic test to which he appealed, how his religion worked, the severest and the certainest test in the world. Christianity, in so far as it is truly Christian, rests upon the same solid foundation as chemistry.

Fortunately most of the books of the Bible are anonymous, and I am glad to see that the labors of the critics have made even more of them anonymous by casting doubt upon their putative authorship. That gives the books a chance to be considered upon their merits without prejudice for or against by reason of the name traditionally attached to them, and it leaves us free to devote our time to the more important question of what they mean to us and how we can apply them.

If I am shown the veritable desk on which Jefferson wrote the Declaration of Independence I look at it with

[21] Luke 7:22.

curiosity and even experience a momentary thrill. But I do not linger over it longer than sixty seconds, because the question I am interested in is not whether this is the actual desk or a forgery, but whether the Declaration is true or not. I do not mean whether the charges against King George are exaggerated or exact, for that is a purely historical question of no practical importance today; but when Jefferson wrote, "All men are created equal," did he state a fact, and, if so, how can we secure the "inalienable rights" to which we are all entitled? I am quite sure that Jefferson would like to have us look at it in this way.

This is what I mean when I say that the biblical critics do not go far enough to suit me. For instance, I have just quoted Genesis 32: 30 on Jacob's wrestle at Peniel or Penuel. I look it up in Bacon's *Genesis of Genesis* and I find that he says that the passage is interpolated by "E, an Ephraimite prophetic writer, circ. 750 B.C." in a document mainly by "J, a Judean prophetic writer, circ. 800 B.C." All right, Dr. Bacon, I take your word for it, not being able to read the original and not having any other higher critic at hand. But if E took the trouble to interpolate this passage he must have thought it important, and maybe it is. He doubtless believed it, and I had just as soon trust E as J, not knowing either of them and both having lived a thousand years after the events they narrate. Some critics say that the wrestling with the angel was an allegory and that Jacob himself was a mythic eponym. But that does not settle the question even if I accept that view. The writer of that passage, whether he was E or J or X or Y, was real, even if

Jacob was an eponym, for the passage exists. What I want to know is what it means when it says that Jacob saw God face to face. Is that to be taken literally? If Jacob could, why can't I? How did the writer reconcile this passage with those saying that no man could see God and live? If he did not believe the opposing passages, why did not he or some subsequent redactor scratch them out when the manuscript passed through his hands?

Each age paints its own picture of God. The deities of one epoch become the demons of the next. The devas were later called devils. The great god Pan of the Romans becomes the Satan of the Christians.

But God hath not left himself without a witness even among the Gentiles. The picture of Zeus in Cleanthes' hymn which Paul quotes with approval [22] was a higher ideal than Jephthah's conception of Jehovah.[23] But few of the Greeks rose to the heights of Cleanthes and Zeus could not on the whole compare with Jehovah, as depicted by their respective devotees. Jehovah appears from the first as a decent God, although a bloody one, while Zeus had a past that he could never live down.

To ascribe wings to God was a primitive inspiration. To ascribe morals to God was not thought of for a thousand years after.

But in recognizing the superiority of the ideal of divinity revealed in the New Testament over that revealed in the Old, we must not ignore the truth that resides in the latter. We must not forget Jehovah in

[22] Acts 17:28.
[23] Judges 11.

our adoration of Christ. We must not let our love of mercy obliterate our sense of justice. This needs some emphasis now because there is a tendency to blot out the severer aspects of the moral law with a smear of sentimentality. In law the governor's pardon follows after the judge's sentence. But we are in such haste to assure the sinner of forgiveness that we do not wait till he has been convicted of sin.

Why attempt to make any picture of God if we know that the best picture must be to some degree inadequate and hence misleading? Because we must. We can convey ideas only by symbols of some sort, first pictures, later words; and the more abstract the ideas the more essential, although the more inadequate, is the use of symbols.

Xenophanes said that if cattle could paint pictures of their gods they would be cattle gods. Very likely, and very sensible of them, too. Much better than if the cattle worshiped worms. But when man makes gods of cattle as he did in Egypt, Assyria, and India, he is demeaning himself, rejecting his birthright, repudiating his race. The worship of the golden calf at Horeb was worse than ordinary idolatry; it was also backsliding.

Since man knows no higher creature than himself upon the earth he can do no better than to use human attributes in describing any higher being. This is what the theologians call "anthropomorphism," and the question of the degree of anthropomorphism allowable has been the chief point of dispute in religious controversy to this day. The tendency is ridiculed by such paro-

dies as: "An honest God is the noblest work of man." "Man created gods in his own image, in the image of man created he them, male and female created he them."

But so long as man remains manlike his ideas will necessarily remain manlike. However he may receive his vision of divinity, he must put it into words or pictures or acts before it can be conveyed to others. The spiritual ideal must be incarnated in a material form. The unknown must be described in terms of the known, the abstract in the concrete.

The same is true also in science. It shows itself in biology, physics, chemistry, even mathematics and metaphysics. Scientists are by no means so free from anthropomorphism as they think they are. I remember my teacher in chemistry, Professor Nef of the University of Chicago, a scientist of the strictest sect, would say in describing the transformation of a molecule that he had drawn on the board: "The atoms are uncomfortable when they are in this position. They do not feel happy till they have rearranged themselves so." [24] Goethe says truly:

"All natural philosophy is in the last resort only anthropomorphism. We can at will observe nature, measure, calculate and ponder it, but it always remains *our* impression, our world. Man always remains the measure of all things."

[24] As I am preparing this for the press I happen upon another example of unconscious anthropomorphism. E. J. Brockman in a paper before the Baltimore meeting of the American Chemical Society, 1925, says: "It is suggested that the formation of complex compounds be due to an inherent desire on the part of the atom of certain elements to complete its outer shell of electrons."

But as man in the course of ages becomes more accurate in delineating the attributes of Deity he drops his crude conception of God as merely a magnified man. When this faulty picture of God has been superseded man loses with it certain of his sins. For instance, blasphemy arises from an incorrect conception of God, from crude anthropomorphism. A man may shake his puny fist in the face of Omnipotence—if Omnipotence appears as a man like himself in every respect except size. But if Omnipotence is conceived as natural law, as an inexorable and impersonal force, then there remains to man no course but humble submissiveness and teachableness. A man may go up boldly against an army of other men but he will not beat his head against a stone wall unless he is insane. Ajax defying the lightning is an heroic figure because he conceived of lightning as jagged arrows in the hand of Jove. But when Ajax comes to conceive of lightning as a high potential difference in electromotive force between the clouds and the earth he no longer shakes his fist at it. He puts up a lightning rod. A man may curse God if he regards him as a tyrant, but it is impossible to curse the law of gravitation. If God is "the invisible King" and physical laws merely his fiats, then we are tempted to try to disobey them. But if physical laws are merely the concise expression of the invariable sequence of events there is no fun in defying them. As man gets a clearer conception of the character of the supreme Being blasphemy becomes not so much wicked as simply absurd.

Law conceived as a command may arouse resentment and rebellion. But one cannot get angry at an alge-

braic formula. To the modern mind a natural law is not a command, but a key; not a prohibition against meddling with the secrets of nature, but a means of unlocking them. The marvels of applied science which make up our modern life show how much truer is our idea of God in this respect than that of the ancients. Kepler, when he discovered the law of planetary motion, cried: "I think thy thoughts after thee, O God." That we are at last in certain fields and to some degree following the line of thought of the creative intellect is proved by the experimental verification of our hypotheses. A child solving his problems in arithmetic knows when he gets the right answer by finding that it works backwards. In the same way we know when we have got the right answer to any of the problems of nature, for then the rule will work, and work both ways, from theory to concrete application and back again.

I hope you will not think I have talked too long and tediously on this subject of symbolism. There is no question more important to understand, since it is the key to the history of religion and the key to other histories as well. The religious wars—No, there are none such; I should say, the wars about religions, have been mostly quarrels over symbols; sometimes, sad to say, over symbols which had lost their meaning to most of the contestants. Symbolism of some sort we cannot escape. We can only exchange one symbol for another, sometimes for the better, sometimes for the worse. An explanation is at bottom merely an exchange of symbols.

It will help to keep us tolerant if we bear in mind

the possibility of two or more different but equally good symbols for the same object, like two words for the same idea, or two theories for the same phenomenon.

A symbol is like a pane of glass, something to be seen through, not to be looked at. When it gets old, dusty, and opaque, then it becomes the object instead of the medium. Successive generations come to the window through which their ancestors, or perhaps only a single keen-sighted mystic, formerly saw the light of heaven. But in the course of centuries the glass has darkened, and become obscured by neglect to keep it clean, or encrusted with the gold and gems with which the pious devotees have adorned it. Still many come and kneel before the window and go away pretending that they too have seen the heavenly vision; and some go away sneering and, because they see nothing through the glass now, they say that nobody ever did, that the first man was a liar and all the rest were hypocrites.

Since symbols quarrel so, and material representations misrepresent materially, and idols are hard to overthrow when once they get implanted, the safest way is that prescribed by the second commandment, to make worship aniconic. There are other and better means of portraying God than by paint or chisel.

All truth, wherever gained, adds to our knowledge of God. Every tiny gem of hard fact that science discovers may add to the mosaic picture of God, though, since the scientist rarely puts it in place himself, and the theologian is apt to ignore it, such tesseræ mostly lie about unused.

The institutions of society, the church, the home, the nation, may be modeled after the divine ideal and may

be filled with the divine spirit and may be carrying out the divine will—or they may be quite the opposite. Woe unto us if our government or our business follows a false god, if it depicts Moloch instead of God the Father.

But it is not in nature and not in art that we can find the best images of God. It is in man himself. As we have seen, our idea of God must necessarily be anthropomorphic. Let us then accept this limitation and take advantage of it to make humanity theomorphic. It may seem absurd that a finite being should aim to imitate infinitude. But a tiny pool may reflect the whole of heaven, if it keep itself calm and clear and peaceful, if it does not allow its own ripples to distort the image so cast upon it from above.

Would you see God? Then ponder the saying of Jesus quoted by Clement of Alexandria: "If thou hast seen thy brother thou hast seen God."

"As many as received him to them he gave power to become the sons of God." Children take after their father. Heredity is the only authentic proof of paternity. We are asked to make ourselves over in the likeness of God. "Glorify God in your body and in your spirit."

If the Christian be not Christlike he has no right to the name. He is a standing repudiation of the fatherhood of God.

What kind of picture of God are you displaying to the world?

BLACK AND WHITE

For God, who commanded the light to shine out of darkness, hath shined in our hearts.—II Corinthians 4:6.

To hear colors and to see sounds is an experience not vouchsafed to most of us. Yet we all do something of the same kind that is quite as remarkable, we ascribe colors to the ethical qualities. Universally do men call goodness white and wickedness black. Angels and devils, wherever they appear upon the surface of the earth, are clothed in these colors with an appropriateness that seems to be instinctive and inevitable. White may be the color of mourning as it is in China. Black may be the garb of respectability as it often is with us. These are matters of custom. But when it comes to ethics all men see alike and never confuse black and white. To turn from the power of Satan unto God is to turn from darkness unto light.

Wherefore this certainty about what no man can prove? Who has seen goodness that he can tell us whether it be black or white? If we are endowed with an ethical sense, which some dispute, the eyeball is at any rate not the organ of it. What reason is there for ascribing whiteness to goodness? None whatever. But when we reverse the question, and ask is there any reason for ascribing goodness to whiteness, we see at once that there is.

For black is the most selfish of colors and white the most unselfish. They correspond then exactly with our

conceptions of vice and virtue and the association of ideas is inevitable, since our highest ideal of goodness is perfect unselfishness, absolute altruism. "Freely ye have received, freely give" is the injunction of the Master. The white object obeys it literally. All the light rays it receives, whatever their kind, whatever their source, these it returns in full measure, undiminished, unimpaired, equally, and in all directions. But the black object does just the opposite. What comes to it, it keeps. Blue rays, red rays, or any rays between, all the colors of the rainbow, all that give beauty to the world, when they come to a black surface are absorbed and are seen no more. Never again will they flash about to gladden the sight and enlighten the mind. Their doom is forever sealed. For over the black portal is written, "Ye who enter here leave hope behind." Black is the Mephistophelean color. It is the Spirit That Denies. It is that which retains, destroys, annihilates.

Our common parlance is wrong from the point of view of the physicist. For black is to him not a color, but the absence of all color, while white is a color, the color, for it is all colors. A similar mistake was made when the electricities were named by Franklin. It now seems likely to turn out that "negative" electricity is the only electricity there is, and "positive" electricity is merely the absence of it. So light is the real thing; pure disembodied energy, ever in motion, swifter than aught else can be, flying through empty space without retardation or deviations. But black is nothing but the place where light has been stopped and killed; every black object is its funeral pile.

"How far that little candle throws his beams!
So shines a good deed in a naughty world,"

mused sentimental Portia, having doffed her lawyer's robe. A trite thought, because a true one, that virtue is always to be distinguished by its activity in radiation, by the brightness and penetration of its beams, by its effects upon its environment. It is, at any rate, the best text we have of goodness. The particular virtue Portia had in mind—was it Antonio's generosity to Bassanio or her own skill in foiling Shylock?—gave forth its full one candle-power of light. But many a 16 c.p. incandescent or 1,000 c.p. arc fails to live up to its rating when measured by this ethical photometry.

A bad deed cannot radiate. At most it is a stain, a blot, which only becomes visible by contrast, which must depend upon its eternal antagonist to give it existence. Its influence is local, for the reason that it is essentially ungenerous. Its blackness is confined to itself. It has no power given it to shed darkness upon surrounding objects, as everything white or colored has of making all things about it more like itself.

There is a proverb much heard nowadays that I never could see the sense of: "The pot can't call the kettle black." Why not, I should like to know? The kettle *is* black. It ought to be called black. Who has a better right to speak with confidence about the faults of the kettle than the pot, which has for years hung on the same crane and inhaled the same smoke? Truthfulness is a virtue if smuttiness is a vice. If there is anything that would make the pot seem less sooty in our eyes it is giving us a clear reflection of the image of the

kettle. Shall no one point out blackness anywhere unless he knows himself to be speckless? Would the pot rise in our estimation if it followed the custom of its critics and said, "The kettle is white, as white as I am?"

There is, strictly speaking, neither black nor white in this world of ours. There are merely things darker and lighter and variously colored. We all specialize in the virtues, devoting our attention to such as suit our purposes. Some of us favor the lower end of the moral spectrum and display the red badge of courage. Others cultivate the more delicate vibrations of the blue end, purity, constancy, and truth. Most of us are prismatic and changeable, flashing forth sometimes one color and sometimes another; perhaps in the course of a lifetime displaying them all, but never all at once and equally in all directions. For the best of us reflect brokenly and partially what comes to us from the source of all goodness, the Sun of Righteousness.

FAITH

Faith is the substance of things hoped for, the evidence of things not seen.—Hebrews 11:1.

EACH profession or school of thought has its own language, its technical terms, its special phrases, that are used with facility and understanding by the members of that profession but which are not comprehended by other people. And whatever is not understood is annoyingly offensive. "Shop talk" is always obnoxious to all except the shopmen. We only partially understand a doctor, a lawyer, or an engineer when he is talking on technical subjects. Science is a bore to most people, largely because they don't understand the language.

Now, of all the sciences, theology has suffered most from this lack of popular understanding of the technical terms because it is more important that everybody should be able to understand a minister than that he should understand a botanist or a physicist. I think the repellent aspect of theological language has had a great deal to do with keeping people out of the church. Many a man has fought all his life against a creed which he would accept at once if it were translated into his own language.

I propose to give here a non-theological discussion of a theological term, the word "faith." The word is largely a theological one but the thing itself is not

merely theological. In fact the reason why I feel less incompetent to discuss this subject than most others in theology is that in my daily work I walk by faith and not by sight. My tools and materials are atoms and molecules, things no one has ever seen, and no one ever can see. Every act is carried on in obedience to natural laws for which I know no reason; but if I should lose faith in them it would be at the risk of my life. In this, however, I am doing no more and no less than every one else. Every one who lives must put constant faith in the laws of nature. Unwavering, unquestioning faith, blind faith, for nobody knows much about the natural forces which he is nevertheless compelled to put faith in.

The law of gravitation was discovered by Newton—that is, our knowledge of it began with him; but men knew it before by faith just as indeed they know it now. A man puts faith in the laws of gravitation long before he studies physics. You know that walking is simply continual falling. You stand on one foot and throw yourself forward, relying on the force of gravitation to bring your body into position to be caught by your other foot. Now if the force of gravitation should change, becoming less or greater or reversed in direction, the result would be disastrous. So it is literally true that we walk by faith and not by sight.

Every breath we draw, every mouthful we eat, is taken with perfect confidence in the chemical laws that govern the composition and reactions of air and food. The farmer who plants his seed puts faith in more laws of meteorology than the science of meteorology knows. He puts faith in the botanical law announced at the

foundation of the world that every seed shall bring forth of its kind. He is sure if he plants alfalfa it will not come up turnips—but he does not know why. Neither does anybody else.

There is a popular impression that scientific men do not need to use faith because they understand the reason for things. That is a great mistake. Nobody really "understands" anything. We know the "how" of a few things, the "why" of nothing. The law of gravitation is simply the statement of a fact; it is not an explanation. There is no theory of gravitation. The only reason that I or anybody can give why a book should not go up instead of down when I let go of it, is that it always has gone that way.

A dog seeing the book go up and not down might be so surprised that he would run and hide; an ignorant man incurious in nature's ways might wonder and talk about it for a week; a scholar might spend a lifetime if necessary in finding out more about it. The man who has studied science does not *know* so very much more than the man who has not, but he has a great deal more faith. The unscientific man is credulous because of lack of faith. He will invest money in a perpetual motion machine, he will employ a rainmaker to send a little smoke up into the air, he will regulate his business by a horoscope, he will buy a bottle of red liquid to enable him to burn water in his motor or ashes in his furnace, he will take a drug that is guaranteed to cure all diseases, he does not question the possibility of getting something out of nothing.

The scientist does not believe these things, but he cannot tell why they may not be. He simply has

greater faith in the constancy of natural law of which these would be contradictions.

Are not the ways of God past finding out? Ultimately, yes, but still we can find out a great deal about them. A chemical library gives a good deal of information as to how God handles atoms and molecules; a biological library, about how he constructs animals; a historical library, about what he is doing with men. By studying the past we can see what God has been doing and by faith in his constancy of purpose we may anticipate what he is going to do. We may to some extent interpret God's purposes. This is of the greatest importance, for it is right here that our part comes in. When we find out what God wishes done, then we can only show our faith in him by doing it. That is what religion is, carrying out God's purposes. That is what we are here for, just as it is what the sun, moon, and stars are here for.

As Blake puts it,

> If the Sun and Moon should doubt
> They'd immediately go out.

To know God and to do his will—that is the whole duty of man. And the word "faith" covers both, for faith without works is dead—that is, there isn't any such thing as faith without works because we show our faith by our works.

You must distinguish between faith and belief. A great deal of trouble has come from confusing the two. Faith involves action, it is a part of life, belief is a purely intellectual process of much less importance. It

is not even necessary that they coincide. In science we put faith in many things that we don't believe. We don't believe that two parallel lines meet, we don't believe that a circle is made of a lot of straight lines, we don't believe in the square root of minus one, we don't believe that space is curved, we don't believe that the ether is harder than steel and softer than air. But we have implicit faith in all these because by using them we are able to carry out our calculations to correct conclusions. It is only by the use of incredible assumptions like these that the paths of the planets can be calculated, or dynamos built, or the strength of bridges determined.

The scientist must act as if certain assumptions are true though often he can see no reason for them and sometimes indeed they seem unreasonable.

One of the reasons why science is regarded by some people as a rival and enemy of religion is that they are misled by the idea that teachers of science spend their time trying to persuade their pupils to believe some thing or other. They do not realize that the question of credence rarely arises in scientific affairs. I taught chemistry for eighteen years, but it never occurred to me to ask one of my students if he thought the atomic theory was true. I should as soon have asked him if the atomic theory was blue. I did not care whether he believed the atomic theory or not. That made no difference to me or to my students. All I tried to do was to teach them to *use* the atomic theory and to realize that if they did not they might get blown up.

Faith is the stimulus and guide to action. That is

why faith and works are so closely, if not inseparably, connected. A mere intellectual belief may not have any influence on conduct. "The devils also believe, and tremble." Trembling is not a form of action, although many folks seem to think so.

The chemist believes that Faraday discovered benzene a hundred years ago. Doubtless that is true, but it does not matter much if the belief is false. We have benzene now, whoever discovered it. But suppose the chemist conceives the idea that he can make a new compound out of benzene by treating it with an untried chemical. He can hardly be said to believe in this nonexistent compound; at least he has no right to till the experiment is tried. He may frankly admit, if you ask him, that the chances are ninety-nine to one against his notion being true. It is merely an hypothesis, an unproved proposition, an unsupported assertion, an act of faith, which may or may not have the backing of reason.[1] In fact it may be contrary to the textbooks, and so incongruous with the laws of nature, as held by his colleagues and himself, that he is ashamed to mention it to them. But he has faith enough in it to go into the laboratory and try it, perhaps to work on it for years. And his faith may be justified by its fruits. He may make the new compound and it may transform the world. That is the way science makes progress, or one of the ways. Man throws his mind forward into the darkness, as a sailor his anchor; it

[1] Even Bacon, the apostle of rational and orderly research, advises trying crazy and absurd experiments. See page 28 of my *Chats on Science,* also the chapter on "How Scientific Inspiration Comes," which shows some curious analogies between scientific and religious experience.

catches onto something unknown and then he pulls himself up to it by the rope of reason.

But some one may object that I have not said anything about faith in God. It is true that I have not mentioned faith in God, but that is what I have been talking about all the time. If faith in the laws of the material world and the laws, less known but no less real, that govern the actions of human beings is not faith in God, then I don't know what it is. For the natural laws that we are so proud of and which some men worship, are after all creatures of our own imaginations, more or less crude representations of what we see and hear. Our textbooks are but foggy photographs of the acts of God, taken by the pinhole camera of the mind of man.

The belief that God wound up the world in the beginning and set it running and that it has been running by itself ever since, except for a little regulating now and then, is rank materialism. We believe in God the Sustainer as well as God the Creator. We believe in a God of the present—not merely a God who did something once but a God who does everything now. For we can get no further back in our explanation of why the book falls down than the simple fact that God put the book and the earth together. That is the ultimate end of all our knowledge, the goal to which all roads lead. We can study how he puts them together, measure the force and the speed, but why we shall never know. So it is true that every one has faith in God to some extent though he may not know it any more than he knows that he walks by faith in gravitation; but there are degrees of faith. Some trust God a little, some more,

none altogether. The Christian trusts God a little more than others because he knows more about him. Faith comes from acquaintance, from communion.

The definition of faith given by St. Thomas Aquinas, greatest of medieval theologians, is a good one: "Faith is the courage of the spirit which projects itself forward, sure of finding the truth." That is, faith is futuristic and activistic. This distinguishes faith from belief, which concerns past events and is passive.

Our social life too involves constant faith. We sometimes hear a man say he has lost all faith in everybody, but if you watch him you will see that his acts belie his words. It is impossible to live among men without faith in them just as it is impossible to breathe without faith in the air. Such a man when he meets a stranger does not turn round to see if he is going to stab him in the back. Time was when men did do that, but no one has so little faith now. Modern commerce is the most remarkable example of the growth of faith with civilization. It is only a few centuries since the Florentine merchants conceived the idea of exchanging promises instead of cash; now that is the way most of the business is done. The greater the transaction the less likely that there will be any hard money used. Indeed, so rapidly does our faith increase that it is quite within the bounds of possibility that in time no money of intrinsic value, no gold or silver, will be actually exchanged in ordinary transactions. A bank is a temple of faith.

I have heard men tell of bribery and corruption in politics and end by saying that they had lost all faith in the government, but I never dared to risk offering

them a greenback or a government bond to see if they were really in earnest. Any one who puts a stamp on a letter and drops it in the box puts faith in the government. So too we may think and talk evil of our neighbors, but we entrust them every day with our lives, our fortunes, and our sacred honor. Civilization is simply an education in faith. War and anarchy are alike due to faithlessness.

Read the eleventh chapter of Hebrews, in which Paul gives examples of what faith has done for the advancement of his own race:

Through faith we understand that the worlds were framed by the word of God, so that things that are seen were not made of things which do appear. . . .

By faith Abraham, when he was called to go out into a place which he should after receive for an inheritance, obeyed; and he went out, not knowing whither he went. . . .

By faith Moses . . . forsook Egypt, not fearing the wrath of the king; for he endured, as seeing him who is invisible. . . .

By faith they passed through the Red Sea as by dry land: which the Egyptians assaying to do were drowned.

By faith the walls of Jericho fell down, after they were compassed about seven days. . . .

And what shall I more say? for the time would fail me to tell of Gedeon, and of Barak, and of Samson, and of Jephthæ; of David also, and Samuel, and of the prophets:

Who through faith subdued kingdoms, wrought righteousness, obtained promises, stopped the mouths of lions,

Quenched the violence of fire, escaped the edge of the sword, out of weakness were made strong, waxed valiant in fight, turned to flight the armies of the aliens.

Our own history is as full of the marvelous achievements of men of faith as was that of the ancient Hebrews, and we should see it as clearly if only our historians were as good as theirs. Let me continue the list, not in parody, but in the same spirit as Paul.

By faith Columbus set out in an open boat to go around the unknown world.

By faith the Pilgrim fathers left their homes and landed on the stern and rock-bound coast of New England. They sought liberty to worship God and became our spiritual forefathers.

By faith Washington took up arms against an empire whose morning drum-beats encircled the world.

By faith Jefferson bought the land wherein millions now live, although people laughed at him for acquiring useless and inaccessible territory.

By faith our fathers crossed the prairies as of old their fathers crossed the sea, to make the West as the East, the homestead of the free.

By faith a band of American missionaries went to the cannibal islands and gave us Hawaii.

And what shall I say of those who by faith removed mountains and bridged rivers; who brought waters to a thirsty land and made the desert rejoice and blossom as the rose; who gave sight to the blind, cleansed the lepers, and caused the lame to walk; of those who went over the sea to share the peril of oppressed peoples, who suffered torment and death from fire and smoke; those who took food to the starving in strange lands; and those who went down into the sea in ships and up into the air like eagles?

History is full of miracles wrought by faith; mira-

cles of invention by men who had faith in the God of nature, miracles of war by men who had faith in the Lord of Hosts, miracles of philanthropy by men who had faith in the All Merciful, miracles of reform by men who had faith in the God of righteousness.

What is there that cannot be accomplished by faith? The Bible says nothing. If any man does not believe it, let him set the limits. Does he know how bad the disease that faith cannot cure, does he know how corrupt the nation that faith will not regenerate, does he know how wicked the heart is that faith cannot redeem? The statements made in the Bible are very sweeping. "If ye shall ask anything in my name I will do it."

Now at first sight this puts the government of the universe in the hands of every individual, of fallible men with passions and prejudices, of men of different opinions whose prayers would be contradictory. But if we examine the words "in my name" we shall see it means more than the formal words "for Christ's sake" with which we end our prayers. It means that the petition is made by a follower of Christ, by one who is striving to bring his own will in harmony with the will of God. The petitioner believes that his request is one which would receive the indorsement of Christ, and if it would not, he would be the first to wish it void. When a man has faith to say that, his prayers will be answered. He shares in the omnipotence of God. God reigns and those who are with God are always on the winning side in the struggle of this life. "All things work together for good to them that love God."

To have a strong and well-founded faith in God we must know him. We must study his self-revelation in

nature, in history and best of all in the Bible, and when we have found out a little of his purposes, then we are to make our purposes the same, for it is in vain that a man fights against God. It is only the man who is on the Lord's side that succeeds in anything. It is only of him who has faith that it may be said, "Whatsoever he doeth shall prosper." Faith is harmony with God, working with him, thinking with him, feeling with him.

THE INTERNAL CONFLICT

I find then a law, that, when I would do good, evil is present with me.—Romans 7:14-25; 8:1-14.

THE older we grow, the more complex does life appear to us. When we are young the problems of life seem quite simple. We have few, but very definite, opinions; we attack our work with singleness of purpose. We make up our minds quickly because we haven't much of any minds to make up. To any question there are but two sides, the right side and the wrong side, as easily distinguished as black from white. We are therefore intolerant.

As we grow older, we find that all questions are really polygons, with many sides, and it is often hard to distinguish the right one among them. We find that many sincere attempts to reform the world have only resulted in deforming it. We have to revise our hasty, intuitive judgments of people. We are surprised to find that criminals have their good traits, and we are shocked at finding serious defects in the characters of those we have admired and almost worshiped. When I show pictures to children the first question they ask is, "Is he a good man, or is he a bad man?" Now there are a few like Nero or Judas, Abraham or John, that I can give a definite answer for, but I find it difficult to persuade the little chaps that humanity is not painted in black and white but with infinite gradations of shade and color.

SCHOOL

Even after a young man has learned by sad experience that people are really very complex, and that he cannot always depend on them to do what he expects them to do, he has a still more startling discovery to make; that is, that he himself is more complex than he had supposed and that he cannot always depend on himself. That is what finally knocks the conceit out of a man and makes it possible for him to amount to anything. It is a salutary and necessary lesson though a bitter one. Whether he has been posing as a respectable man or as a "tough" he finds that his acts are not consistent with his profession, that it is just as hard to live consistent to bad principles as to good ones. He finds out, what was incredible to him before, that he does things voluntarily that he does not want to do, that this paradox is a reality. Just as he finds that his physical constitution, which he thought invulnerable, gives way at critical moments, so his moral nature shows unexpected weaknesses that alarm him. He detects himself in unworthy acts that he supposed himself incapable of; he does things at which his whole moral nature revolts.

Now it is a critical period in a man's life when he makes the discovery that there are two natures struggling within him. Many a young man when he finds out that he can never be wholly good, gives up the struggle and determines that he will be wholly bad, only to find that the limitations of human nature do not permit that either. He cannot rid himself entirely of either of the two natures struggling within him. What he can do is to decide which shall be master and which the intruder, which one of his two natures he will love

or hate, serve or despise. "Religion is the devotion that half of every individual yields to his other half, the worship of his more vigorous and heroic by his more abject and inert aspects." [1]

Experimental psychology has given a more definite and literal meaning to the words of Paul. We now know that it is possible to separate in an individual two or more selves which may be quite distinct in character and ability. One may be dull, the other witty; one may be peaceable, the other quarrelsome; one kind, the other mischievous. These may alternately control the speech and actions of the individual, or they may simultaneously manage different parts of the same brain. An instance of this is found in cases of periodical insanity in which a man leaves his family and friends, for months leading another life, knowing nothing of his former self until his return—as we say—to his senses, to himself. We see the same thing in the periodical drunkard who acts and feels like another person when on a spree. He has no shame for what he does under those conditions, as he does not feel responsible for the other man. Nothing so weakens the power of the higher nature over the lower as do alcohol and morphine. Formerly, when people saw these strange changes by which a sober-minded and respectable man became for a time a criminal and a lunatic, losing both his moral and his mental sanity, they said he was "possessed of a devil." I, for one, do not object to that phraseology. I think it better than the vague and sentimental phrases we have substituted for it. There is just as much convenience and propriety in personify-

[1] Ortega y Gasset.

ing the forces of evil as the forces of good. But it is out of fashion now to speak of the devil in polite society—perhaps because it is not good manners to discuss a person who is present.

Ordinarily, of course, our good and evil tendencies do not crystallize into distinct selves. They appear merely as impulses acting on our thoughts and sometimes influencing our acts, so that we "do that which we would not," although we do not go so far as to develop a Dr. Jekyll and Mr. Hyde complex.

> Within my earthly temple there's a crowd,
> There's one of us that's humble, one that's proud;
> There's one who's broken-hearted for his sins,
> There's one who unrepentant sits and grins;
> There's one who loves his neighbor as himself,
> And one who cares for naught but fame and pelf.
> From much perplexing care I would be free
> If I could once determine which is Me.

The last line covers the important point, to determine which of these several selves *I* will be. That is our duty, to decide with which of these warring factions we will ally ourselves, to choose this day whom we will serve, God or Mammon. It is out of our power to be pure angel or devil; we have merely to make up our minds on which side we will fight. That is the way Paul did. He saw the right, and boldly declared himself on that side. Thus he could fight internal evil just as well as external evil in other people. "Now if I do that which I would not, it is no longer *I* that do it but sin that dwelleth in me. For *I* delight in the law

of God, but I see another law in my members warring against the law of my mind."

Notice another thing, Paul identifies his sinful nature with his *body* and his better nature with his *mind*. Is that fair? Are not mind and body equally good or bad? at least equally important? Some of Paul's denunciations of the flesh sound harsh to us nowadays; we suspect him of asceticism. For just now we are in an age devoted to the glorification of the physical. Whatever is natural is right, they say, meaning by that whatever is dictated by that nature we share with the beasts. It is an age like that of later Rome when the athlete was more admired than the scholar. It is the popular philosophy that health implies goodness, and that a sound body will insure a sound mind. The gymnasium is advocated as a substitute for both school and church, and men teach that all that is needed to reform the criminal in the slums is plenty of soap and water with a park near by where he can go and look at the pretty flowers whenever he is tempted to be naughty.

This point of view ignores the fact that it is the criminal who makes the vicious slums, not the reverse. Man is not the product of his environment; he creates his environment. As Plato says, "The soul spins its own web and weaves its own body." All efforts to secure pure food, pure water, and pure air are to be encouraged, but we must remember that it is as true today as it ever was that it is not what goeth into the mouth that defileth a man, but those things that proceed out of the mouth, come forth from the heart, they defile a man. Evil is not something that comes to us from without, from unfavorable circumstances. It has

its source in our own hearts. Evil exists nowhere but in the hearts of men. Circumstances may develop it, but the germ must be there to be stimulated. A temptation is harmless to one who is not tempted. The fortress of Mansoul is never carried by storm; if it falls it is always due to traitors who open the gates. A man's foes shall be those of his own household—yes, even of his own body. This is expressed by Barnard's group of statuary, and by Hugo's lines, "I feel two natures struggling within me."

This evil is born in us; it is an inheritance from our ancestors. This doctrine of natural depravity, of congenital evil, is one that is very obnoxious to modern taste, which shuts its eyes to everything unpleasant, and believes only what it chooses to believe. But that which people most dislike to hear is what they need to hear the most. If I choose to discuss unpleasant topics it is because I am freer to do so than your pastor would be.

The doctrine of natural depravity was held by the church through centuries of trial and persecution. To give it up now when the whole weight of science has come to its support would be foolishness. According to the sentimentalists we come into the world trailing clouds of glory from heaven which is our home. Thank God, heaven is our future home, not our past home; man's destination, not his origin. Rather say: we come into the world prisoners to sin; dragging after us like a ball and chain the sins of our ancestors from nobody knows how far back. It is the body with its inherited, brutish instincts and passions that draws us backward and downward; it is our new endowment, the soul, that

inspires us to rise. Plato likens a man to a charioteer driving two horses, one black and fractious ever pulling downward, the other white, and winged, striving heavenward; and it takes a skillful driver to keep such a team pulling together.

It would not be becoming in an amateur preacher to settle all the theological problems that have puzzled the ages, but I will suggest that the question of the origin of evil is not so dark as it once appeared. Evil is largely the survival of the unfit. Man is progressing gradually, and partially; there are no sudden changes. As the boy outgrows his clothes but has to wear them even when they get too tight, and inadequate, so we have the remnants of the ethical garments of antiquity about us yet.

For good and evil are relative terms, like white and black, up and down. The virtues of the savage become the vices of the civilized man. Evil is an anachronism. Dirt is matter out of place, weeds are plants growing where they are not wanted, sins are moral weeds and dirt—mistimed and misplaced acts. The vermiform appendix and wisdom teeth are physiological sins. Formerly useful organs, they are now useless, and *therefore* dangerous. Satan finds some mischief still for all our idle organs to do.

Most of our modern vices are virtues that have outlived their usefulness. We inherit—and I use the word in a wider than the physiological sense—we inherit our domineering temper and haughtiness from the "knights of old." It was a virtue with them; it purified the race and raised it to leadership. It is a vice with us; it is the source of class hatred, feuds, and caste.

We inherit the love of fighting from our Viking ancestors. It was a virtue in those days; it regenerated dying nations. It is a vice now, making us quarrelsome and offensive, and standing in the way of peace. Anachronisms are dangerous.

The ancient inhabitants of the shores of the North Sea were superstitious. They thought fire was a demon and the wind a spirit. It was a virtue in them. It led to a belief in an All-Father and a future heaven. But superstition, having done its work, is now a hindrance to progress. It befogs the objects of daily life, leads us astray into many foolish ways and veils for us the face of God himself.

It is of course not evil alone that we inherit. From those medieval knights we get our chivalry and our sense of honor; from the Vikings our courage and love of adventure; from the primeval man our endurance and ability to do hard work. The good we inherit remains and develops, the evil gradually dies out. Evil is transitory; good is permanent and immortal.

The battle between good and evil is a part of the universal struggle between progress and conservatism, between force and inertia. Not that conservatism is always wrong; on the contrary it is generally right. Not all changes are progress, only one, one out of the many possible. Each new standard of morality shames the old. But mankind does not march in rank like soldiers, keeping step together. There are pioneers and stragglers. Not all those who are living on earth at the same time are moral contemporaries. There are people we see every day still living in the Dark Ages, with medieval virtues, ideals, and aspirations. Some

people are pagan, and some prehistoric, with a natural code of morality that would disgrace a troglodyte or a mound builder. Some of our acquaintances are probably living already in the twenty-first century—if we only knew which they were.

Not only this, but each individual has different standards, belonging to various dates, incongruous, incompatible, his members warring against one another, and sometimes he leaves the twentieth century and slips back to some ruder age or even to the level of the brutes. There is always a kind of moral gravitation acting to pull us downward and backward. "Onward and upward" must be our motto. There can be no standing still. In the words of Christina Rossetti:

"Does the road wind uphill all the way?"
"Yes, to the very end."
"Will the day's journey take the whole, long day?"
"From morn to night, my friend."

We must "move upward, working out the beast, and let the ape and tiger die." We must climb on stepping stones of our dead selves to higher things.

If then we find ourselves born in bondage, endowed with the sins of our ancestors, what can we do? Can a man fight successfully against heredity? Well, yes, to some extent. But there is a better way. Change the heredity. Adopt a new father and inherit goodness instead of evil. That is the plan recommended in the chapter that I am merely paraphrasing in modern language. [2]

"For as many as are led by the Spirit of God, they

[2] Romans 8:10, 14-17.

are the sons of God. And if children, then heirs, heirs of God, and joint heirs with Christ."

We cannot greatly alter the body we were born with, but we can change our character. We cannot alter our features but we can change our expression.

We can have help in our climb, in our fight. We can get inspiration and strength. In the fight of spirit with flesh we can have the support of the spirit of God. The more we use this assistance the more assistance we get. Unto him that hath shall be given. Strength, either physical or moral, that we do not use is taken from us. We have all, probably, consciously received some aid from this source. We do not get more because we do not use what we have. We do not realize what a dangerous fight we are in until the moment when the powers of darkness catch us unaware and overthrow us.

Now "conversion" is merely this change of allegiance, of heirship. It is not change of mind, but change of self. It is not acquiring a new cargo, but shifting the center of gravity. Sometimes it is coincident with a change of opinion, but usually not. You simply ally yourself with the better elements of your nature and make them dominant. The change may be as sudden as the change from insanity to sanity. Following this change, before it can be anything more than a good intention, must come a life of struggle and development. You have put yourself on the right side, you have yet to make it the winning side.

A little girl once went to Sunday school and they taught her Paul's words, "I keep under my body." When she returned her mother asked her for the

"Golden Text" and she said, "I keep my soul on top." I have sometimes thought the little girl improved the text. For the best way to eradicate evil is to crowd it out. The best way to destroy sin is to cultivate virtues. The wise gardener works to get his crop so flourishing that it will overshadow the ground and so keep down the weeds. I do not say that in our moral gardens a little pruning and weed-pulling are not necessary, but the main effort should be toward culture rather than protection. If a man should devote his whole time to getting rid of his vices, and nothing more, he would finally succeed in producing only barren soil, devoid of goodness as well as evil—good for nothing. But he could not even succeed in getting rid of his vices in that way, for nature abhors a vacuum. We must substitute. Interdiction has its place, but substitution is better. When a new ideal is introduced the old ideal withers away. The child gets enjoyment from active play. He wonders who makes the grown people sit still and talk. As he grows older it is the conversation that attracts him and he has a distaste for his top and ball. People who enjoy coarse pleasures cannot understand why there are others who do not take part in them. They do not realize that to persons of refined taste they are not pleasurable, but painful or disgusting. The only effective way to stop the reading of pernicious literature is to stimulate a love for good literature. A healthy mind gradually outgrows such tastes anyway, and looks with amusement on the trashy books he was once so fond of, especially when he notes that the silliest passages are those he marked and underscored.

The ascetic idea of repression does not develop the

highest type of character. Notice the change in phraseology from the Old Testament to the New Testament. "Thou shalt have no other Gods before me," "Thou shalt not" is the way Moses expressed it. Christ's words are, "Thou shalt love the Lord thy God. . . . Thou shalt love thy neighbor as thyself." The gospel method is active; the cultivation of virtue, not restriction of vice. Do, instead of do not. The Gospel set people to doing right instead of escaping wrong. The lower nature loses its power as we cultivate the higher, and finally we may say with Tennyson:

"I have climbed to the snows of age and I gaze at a field in the Past,
Where I sank with the body at times in the sloughs of a low desire.
But I hear no yelp of the beast and the Man is quiet at last
As he stands on the heights of his life with a glimpse of a height that is higher."

THE GREAT BACKSLIDING

Can ye not discern the signs of the times?—Matthew 16:3.

THE new map of Europe, with its patchwork of isolated nationalities, will look more like the Europe of the Middle Ages than like the Europe of the nineteenth century with its vast imperial aggregates and its commercial and cultural internationalism. The medievalism of the modern map reflects the medievalism of the modern mind. In art, literature, religion, and social forms we cannot fail to observe a decided reaction toward more primitive modes of thought. It is said that "revolutions never go backward." It would be quite as correct to say that wars always do.

However praiseworthy the main aim of the conflict, and however complete its triumph, yet war is followed by a lassitude and lapse in which other gains of civilization may be temporarily lost.

The material losses of the Great War are not so serious as the moral and mental losses. The victorious nations seem to suffer as much as the defeated nations from such maladies of the mind. Our own country, though less and later involved in the war, has not escaped the contagion.

It would be wrong to ascribe the psychological changes manifest since the war to the war alone. Perhaps rather we should say that the war was one of the symptoms of the prevailing psychology of our times.

What makes our age different from all the preceding and invalidates the deductions from history is the possession of inanimate power. Man is drawing upon the accumulated capital of the millions of years prior to his advent. In his use of coal and oil he is lighting his houses and running his machines with the sunshine of the Carboniferous Era. Science has given each of us, every man, woman, and child in America, if the apportionment were equal, a train of twenty slaves to wait upon him night and day.

What this acquisition of inanimate energy might mean for the advancement of civilization we can hardly conceive, for of late it has been largely used for the destruction of civilization.

We have now come to realize that what is done by an engine depends as much on the character of the engineer as on the power of the machine. Our horsepower per capita has risen to an unprecedented height. But has our mindpower per capita increased with it in proportion? If not, this new-found force may prove dangerous to us. The question on which the future depends is whether men can muster up among them enough mentality and morality to manage the stupendous powers which applied science has recently placed in their hands. Once upon a time, long before the oldest of us was born, before any man was born for that matter—I refer to the Jurassic Era—the ruling race was composed of creatures much larger and more powerful than we are. There were giants on the earth in those days, gigantic saurians which when they stood up on their hind legs would tower up four times as tall as a man. But their cranial cavity was smaller than

ours. The Jurassic saurians had grown too big for their brains; so they perished.

Now the addition of machine power to the natural strength of man is equivalent to adding more powerful arms and legs, more skillful hands, and sharper senses. It increases his physical capacity but does not directly enlarge his mental ability. It endows him with a giant's strength but does not teach him how to use it.

Among the horrid fancies that haunted the head of Samuel Butler of Erewhon was a nightmare of a coming age when the machines that man has made for his service should rise in Spartacan revolt and enslave man. This skit of Butler's on "The Mechanical Creation" is brought to mind by recent events.

The last few years have made it manifest that in our civilization the mechanical forces have got ahead of the moral forces. Man is mounted on a bigger horse than he can ride. Making war was an efficient process; making peace is—not. The chemist did his bit with amazing, even alarming, proficiency. The diplomat fell down on his job. The physical sciences have evidently been developed so far beyond the political sciences as to constitute a menace to civilization. The modern man, like the Arabian fisherman, has liberated from the bottle genii that he does not know how to control.

The late War revealed to the horror of the world the possibilities for destruction that science has placed in the hands of mortal man. Unless he has undergone a moral reformation, of which there is no apparent sign, he is not likely to be deterred from using them by a paper prohibition. The Prince of the Power of the Air will be the ruling spirit in the next war—if there is a

next war. It is now possible to send an airplane, with or without a pilot, by day or night, over the enemy's country to sprinkle the ground with a liquid so deadly that a whiff inhaled or a few drops touching the skin will cause death. There is no need for fine sighting and mathematical calculations such as the artilleryman requires; no need to know where the enemy is. The airships or self-propelled projectiles will simply move over the land, as a farmer's potato-bug sprinkler goes over a field, and a certain strip of territory, say half a mile wide and a hundred miles long, will be instantaneously depopulated and will remain uninhabitable for days to come.[1] In the next war, if there is one, there will be no frontiers, no intrenched line, no exempt cities, no distinction between combatant and noncombatant. Fortifications will be futile, for the wall that will withstand a forty-two-centimeter projectile is easily penetrable to a molecule of poison gas. The next war, if there is one, may be decided without the action of cavalry, infantry, or artillery. On sea the revolution will be quite as complete. There will be no need to sink ships in the next war, for the reason that it is not worth while shooting a riderless cavalry horse.

[1] Being merely a layman in military matters, I make the claims for chemical warfare conservative. Experts may go further; for instance, Major-General George O. Squiers of the United States Army, in speaking at the Franklin Institute Centenary, said: "Just as we now give a harmless anesthetic to an individual for a surgical operation, so we may be able in the future to put a whole nation asleep for forty-eight hours, by a combination of new chemical discoveries with radio-controlled manless airplanes." For further discussion of the question of the revolution in warfare see the little book entitled "Callinicus," by Dr. J. B. S. Haldane of Cambridge, who was in the British army.

Can we say that man has reached a moral and mental maturity so that he can be safely entrusted with such dangerous weapons? We cannot take them from him as we can take a revolver from a child. A paper prohibition will not restrain an unscrupulous or desperate enemy from using any effective weapon. But it is clear that unless man can learn how to make proper use of his new-found knowledge he is likely to destroy himself. Science has endowed man with the power of a superman, but his mind remains human, all too human. He is like a pauper come into a fortune, a laborer who has been put into the position of boss of the shop, a private promoted to command the regiment, a slave made the master of slaves. Man has had no training for such responsibilities as have now been thrust upon him. This new command of time and space, this mastery of unknown forces, this apparition of new perils, this entrance into untried fields, all these are too much for man of today. He secretly shrinks and openly blusters. He alternately cowers and brags. He lacks confidence in himself and therefore he suspects others. He is afraid of the dark. He is afraid of his shadow, for that is dark. He shudders with ancient fears. The modern man is suffering from shell-shock. He has all the various symptoms. Those who stayed at home are often worse than those that went over there. The victorious nations show the same symptoms as the defeated.

The causeless suspicions, the sudden hatreds, the erratic actions, the intolerance of opposing opinion, the unwillingness to face facts, the return of primitive modes of thought, the alternations of despair and dis-

sipation, the substitution of emotionalism for rationality, the revival of superstition—such are the stigmata of hysteria and such are the characteristics of our time.

In mental diseases where the conscious will relaxes and the more recent centers of thought decay, the patient relapses into a sort of second childhood, using baby-talk, drawing the crude pictures that he made when first he took pencil in hand and reverting consciously to the unconscious vices of infancy.

An uprush of infantilism from the unconscious mind of the human race is dragging the modern world back to the superstitions, obscurantism, formalism, gargoylism, and parochialism of the Dark Ages.

Our most advanced artists take as their teachers the most backward savages surviving on the earth. Formerly ambitious young painters went to Greece or Rome to study. Now they journey to Tahiti or the Congo. If a modernist art gallery should be preserved for several thousand years the archeologist of that day studying the style would unhesitatingly assign it to a period prior to, and more primitive than, the Upper Paleolithic when the Cro-Magnon man depicted the mammoth and the reindeer on the walls of the caves of Altamira, 25,000 years ago.

Modern literature, especially poetry, shows marked reversion to infantile types, in the breaking up of the logical sentence into disconnected fragments, in the appearance of nouns without verbs and adjectives without nouns, in the shortened paragraphs, in the ejaculatory style, in the overruling of sense by sound, in the repetitions resembling echolalia and verbigeration.

In music the same reversion to the childhood of the

race is apparent. The tom-tom sets the pace for modern progress and the primitive piper calls the tune to which we dance.

In religion we see a strong reactionary movement, affecting in some degree all the various churches. There is stricter insistence on creedal requirements, denominational lines are more rigidly drawn, and heresy trials are becoming common. Medieval forms and ceremonies are coming into the very churches that were originally established as a protest against them. Sects practicing primitive modes of worship, such as the Holy Rollers, are gaining rapidly in numbers. Intolerance in all forms, racial, sectarian, linguistic, patriotic, becomes daily more dominant and bitter. In the recent national election sectarian issues were more conspicuous than ever before.

The movement toward medievalism in art, religion, industrial organization, and social forms is gaining ground under the leadership of such brilliant writers as Gilbert K. Chesterton. It seems as if man, with his eyes half opened, resents the light. "Pull down the curtain," he shouts to the scientist, "or I'll pitch you out of the window." Then he rolls over and pulls the cover over his head to get another nice long sleep such as he had from A.D. 300 to A.D. 1200.

The world, like a child at Christmas, is willing to receive the material gifts of science but refuses its moral lessons. The world will accept from the hands of science railroads and radios, soft raiment and foreign foods, airplanes and submarines, but turns a deaf ear when science would talk of peace, efficiency, economy, foresight, and the frank facing of facts.

It was commonly supposed that the fights for evolution and the higher criticism of the Bible which had absorbed so large a part of the intellectual activity of the nineteenth century had been virtually won by the beginning of the twentieth, but we see now a strong movement against both. The Fundamentalists are endeavoring to eliminate the teaching of evolution in the schools and colleges. It is even proposed to go further and to prohibit by law the teaching of anything that offends the religious sentiment or undermines the faith of any one. Under this law it would be impossible to teach that the earth is round or that the Indians are not descendants of the lost Jewish tribes or that there is any such thing as disease in a school containing a Dowieite, Mormon, or Christian Science child. Teaching under such circumstances would be one of the extra-hazardous professions.

We became accustomed to the censorship and the mass suppression of unpopular opinions during the war, and the disposition to use such legal and illegal means for the repression of undesirable views has been growing ever since. The most remarkable feature of the situation is that there is almost universal acquiescence in the restriction of the rights of free speech and propaganda for which our ancestors fought and suffered martyrdom.

One of the curious though natural results of the War is the millennialist movement which is now sweeping over the country and has appeared in Europe. It is not due to the influence of one powerful personality, but has sprung up spontaneously in various churches and localities, an instinctive outbreak of the folk-psy-

chology, of a state of mind such as prevailed in the year 1000, when it was commonly believed that the end of the world was at hand.

Along with the suspicion of science and scholarship comes a distrust and dislike of modern civilization, which is built on a scientific foundation. People are looking with longing eyes back to a primitive paradisial period, or forward to a rural Utopia, to an Edenic or Arcadian life. Some would have us take to the woods; some to the South Seas. "Back to Nature" is the theme of poets, romancers, and even preachers. In India Mahatma Gandhi heads a powerful movement for the elimination of machine power and its products. In Germany the multiform Wandervogel movement shows a tendency to revert to prehistoric sun-worship and to discard the customs and costumes of civilized life.

This revival of the worship of the heathen earth-goddess, Magna Mater, began in an inoffensive fashion in the literature of the latter part of the eighteenth century and has since infected all classes and countries. It is now securely enthroned in the two strongholds that were erected against it, church and school. The neo-pagan poet Swinburne, who wrote

> Thou hast conquered, O pale Galilean;
> The world has grown gray from thy breath

was premature in his despair. He might better have written

> Thou hast conquered, O rosy Rousseau;
> The world has grown gay from thy breath.

Those who say "God made the country but the devil made the city" are reading history backward. The word "pagan" means literally "countryman" (paganus). "Civilization" is by self-definition a product of the city dweller (civis). Our modern nature-lovers are trying to rob the Creator of credit for the highest products of creative activity. They would make a scapegoat of God and drive him out of the town into the desert. But God is not in the thunder or the whirlwind, but in the voice, the artificial creation of man. It is only by overcoming nature that man can rise.

The cult of naturalism is now dominant everywhere. The call of the wild is drowning out the appeal of civilization. "Back to barbarism!" is the slogan of the hour. Sink into savagery. Praise the country and denounce the city. Admire cliffs but make fun of skyscrapers. Extol forests and despise laboratories. Exalt the physical and ignore the intellectual. Spend half a million dollars on a new stadium and let the old library go to ruin. Abolish compulsory Latin and establish compulsory swimming. Patronize football and neglect debating. Up with the soldier and down with the savant. Promote pugilism and suppress pacifism. Jazz your music and cube your painting. Roughcast your walls, corrode your bricks, deckle your book-edges, wormhole your furniture, weather-stain your woodwork, coarsen your fabrics, and deform your pottery. Condemn everything new and worship everything old. Regenerate obsolescent languages, restore antiquated spelling, adopt medieval costumes, revive ancient rituals, inflame traditional animosities, resurrect forgotten realms, reërect overthrown barriers. Cul-

tivate the primitive virtues of personal bravery and clan loyalty. Reprove and repress the Christian virtues of kindliness and universal sympathy.

Some of the signs of the times I have enumerated are good things in themselves, some are trifles of no consequence, but they all hang together and a floating straw shows the current of a river as well as a log. A change in taste is often the precursor of a shift of the trend of human affairs. The dominant tendency of the times is undoubtedly downward and backward, and the advance of science and the uplift of religion have not yet availed to check it.

It is a reactionary spirit, antagonistic to progress and destructive to civilization. Science and Christianity are at one in abhorring the natural man and calling upon the civilized man to fight and subdue him. The conquest of nature, not the imitation of nature, is the whole duty of man.[2]

Metchnikoff and St. Paul unite in criticizing the body we were born with. St. Augustine and Huxley are in agreement as to the eternal conflict between man and nature. In his Romanes lecture on "Evolution and Ethics" Huxley said, "The ethical progress of society depends, not on imitating the cosmic process, still less on running away from it, but on combating it," and again, "The history of civilization details the steps by which man has succeeded in building up an artificial world within the cosmos."

Our sins are mostly survivals. Like the vermiform appendix they are vestigial organs, needing excision.

[2] This question is discussed in the first chapter of my *Creative Chemistry;* in fact it forms the theme of the entire book.

It is those who believe in perpetuating the pugnacious propensities of the lower animals and man in his lower stages who are responsible for these years of war and the consequent anarchy. Modern literature is tainted throughout by that most pestilential heresy, zoölatry. From the child's primer to the sociological treatise, animals and insects are held up for our admiration and imitation.

This pan-pagan spirit has so corrupted our religious faith in recent years that a biologist is nowadays liable to be accused of blasphemy if he ventures to point out the imperfections in the human body or the waste and useless suffering that prevail throughout the animal and vegetable kingdoms.

A few centuries ago he would have been accused of blasphemy if he had said a good word for nature. I could quote—if anybody would read them—a continuous series of citations from the church fathers of every one of the first eighteen centuries of the Christian era proving that nature was altogether corrupt, vile, degrading, and accursed; something to be avoided, fought, subjugated, and eradicated as the only hope of man's salvation. The Bible indeed tells us that the Creator when he first looked over his work pronounced it "good," but we know that he later discarded many of those early models, such as the megalosaurus and the pterodactyl, in favor of more modern designs; and man has continued the work of his Maker by improving on the cattle and fruit trees that he inherited. He has even made some changes for the better in his own appearance if we may judge from the pithecanthropus,

but nothing to boast of compared with what he might do for himself by a strict course in eugenics.

The real heretic is the man who believes in the infallibility of nature and holds that it is the duty of man to conform to prehuman and subhuman conditions and conduct, instead of establishing new and higher aims and activities. John Stuart Mill was for once in his life orthodox in the strictest sense when he wrote:[3]

> The doctrine that men ought to follow nature . . . is equally irrational and immoral. Irrational, because all human action whatever consists in altering and all useful action in improving the spontaneous course of nature: immoral because . . . any one who endeavored in his actions to imitate the natural course of things would be universally seen and acknowledged to be the wickedest of men.

We should not allow our enjoyment of the beauties of nature, or our appreciation of the marvelous adaptation of natural processes, or our dependence upon nature for existence, to blind us to the defects of nature, or to seduce us from our duty to thwart and subdue nature in so far as she interferes with our aspirations toward a higher life and a better social order. "Nature is the work of the devil," says Blake in his blunt way, and while this may savor of the Manichæan or Gnostic heresies, it is not far from the view of Jesus [4] and of Paul [5] that Satan is prince of this world, and his régime must be overthrown before the kingdom of God can be established on earth.

[3] *Three Essays on Religion.*
[4] John 12:31; 14:30.
[5] Ephesians 2:2; 6:12.

But whether we use the language of ancient theology or of modern science we must admit the obvious fact that the best interests of mankind are often in opposition with those of other creatures, and that the advent of man, with his vision of the future and his ethical ideals, brought a new factor into the world which contravenes the previously existing system. "Mother Nature" is a fine phrase but misleading. We cannot forget that she has other children besides us. Nature must love the microbes, for she makes so many of them. Her smallest offspring are her eldest and her favorites, and to feed them she does not hesitate to sacrifice her latest and noblest, man. As for the ethics of nature, Matthew Arnold put it well in his "Sonnet to an Independent Preacher":

> Know, man hath all which Nature hath, but more,
> And in that *more* lie all his hopes of good.
> Nature is cruel, man is sick of blood;
> Nature is stubborn, man would fain adore:
> Nature is fickle, man hath need of rest;
> Nature forgives no debt, and fears no grave;
> Man would be mild, and with safe conscience blest.
> Man must begin, know this, where Nature ends:
> Nature and man can never be fast friends.
> Fool, if thou canst not pass her, rest her slave!

Of all the various definitions of civilization I like best that of Hellwald:[6]

"Civilization means the mastering of nature and the taming of man." The mastering of nature is the task of science. The taming of man is the task of religion.

[6] *History of Civilization,* 1874.

Man has no friends in the world except other men, and sometimes they are his enemies. As the latest comer on this planet man finds all the older inhabitants leagued against him and has to fight for a footing, sometimes for life. Léon Daudet in a curious and suggestive article on "Moloch and Minerva"[7] defines human life as "the totality of the energies that resist nature." War, in his point of view, is a periodic revenge of nature against man, a kind of moral cataclysm, which breaks out whenever man, through the employment of the forces of nature, threatens to become master of the universe.

Of course man is in a sense a part of nature if we define nature as meaning everything in the universe. But that use of the term is so limitless as to be meaningless. So I am using the word in its ordinary sense to distinguish man and his works from the rest of creation. For unless we make this distinction we cannot understand art, science, or religion. Man, by his unique ability to remember and record the past, to foresee the future and to remodel the world, has set himself apart from and above other creatures, and the gulf grows as civilization advances. Art is a mode of escape from reality into a new world created by the imagination of the painter, writer, or musician to suit himself. Science affords the means of transforming the material world into one more convenient for the needs of mankind. Religion reveals to us a vision of a better world and fits man for it by showing him how he can transform his own nature. All three of these

[7] "Moloch et Minerve: La guerre, la nature et l'homme," *Revue universelle,* Jan. 15, 1924.

agencies of civilization are efforts to rise above nature, and all three have therefore super-natural aims.

He who merely paints things as they are is no true artist, but a realist. He who is satisfied with things as they are is no true scientist, but a naturalist. He who worships the "God of Things as They Are" is no true Christian, but a heathen. The real pessimist is he who thinks everything is as good as it can be.

Christianity is an exotic plant, a new species of religion, not natural to the soil and climate of this world and so requiring constant care and cultivation, lest it should be overrun and crowded out by native weeds. The body of man, which he has inherited from the quadruped, is not adapted to the upright attitude that man has assumed, and this is the cause of many of our diseases. The moral nature of man, which he has inherited from the savage, is not adapted to the ethics of Christianity, and this is the cause of many of our sins. Uprightness of the body and righteousness of the soul are acquired attitudes and therefore difficult to maintain.

We could not expect that the present tendency toward a blind admiration of nature, that is of the sub-human and sub-civilized, would be without effect upon the current standards of morality, and such indeed is one of the most conspicuous changes manifest in our times.

One of the changes that we must frankly face is the rebellion against the code of morals on which our civilization is based. Formerly those who broke with the Church were careful to declare that they acted in the interests of a purer religion and a higher morality.

Those who denied the divinity of Christ were loud in their profession of admiration for the teachings of Jesus. Now, however, we must recognize that a large and increasing class of people in every country not only violate the standards of Christian ethics, but explicitly repudiate them. Violence is advanced as a necessity of the class struggle and even as a desirable thing in itself. Murder is taught as a fine art; the opium dream of De Quincey has become a reality. The destruction of property, the smashing of machines, the damaging of products, the ruination of business, are urged as a sacred duty. Handbooks on the theory and practice of sabotage are published. Work is neglected, not merely from natural laziness, but from conscientious causes. The violation of contract, the breaking of promises, is regarded as the highest ethics. Hatred is diligently cultivated. Licentiousness is openly advocated. Altruism is denied as undesirable or impossible. Sympathy is denounced as a symptom of weakness and degeneracy. Charity is considered as a double injury: it curses him that gives and him that takes. Thrift and industry are classed as vices instead of virtues. Cursing is commended; drunkenness is defended. Family quarrels are encouraged, and wife-beating is advocated by popular writers of the day.[8]

[8] For example—I mean, for instance—D. H. Lawrence in his *Fantasia of the Unconscious,* advising husbands how to treat their wives, says: "If you hate anything she does turn on her in a fury. Harry her and make her life a hell, so long as the real hot rage is in you. . . . Fight your wife out of her own self-conscious preoccupation with herself. Batter her out of it till she is stunned." And Nietzsche and Wedekind would say "Amen."

Such sentiments in one form or another crop up in current literature so frequently and in such varied forms that it is vain to try to suppress them by any sort of censorship. If it were possible to crush out the Bolsheviki in Russia, the syndicalists of France, the anarchists of Italy, the Nietzscheans of Germany and the I.W.W. of America, there would still persist this spirit of denial of the established principles of ethics. It is not merely antichristian; it is clearly antimoral, for it is a challenge to all that has been regarded as the code of morality throughout the recorded history of the human race. The code of Hammurabi of Babylon, the maxims of Ptah-Hotep of Egypt and the laws of Moses of Sinai show that essentially the same fundamental principles of right and justice were held then as now. In the seven thousand years since, few persons have questioned them, though many have disregarded them. The new thing is that now we hear them openly and emphatically denied and denounced. We can only hope that the advocates of the new immorality may be as unsuccessful as the preachers of the old morality in persuading the people to follow their injunctions.

Perhaps too we can get comfort from Carlyle's faith in the future: "Religion in unnoticed nooks is weaving for herself new Vestures, wherewith to reappear, and bless us, or our sons or grandsons."

THE REVIVAL OF WITCHCRAFT

Thou shalt not suffer a witch to live.—Exodus 22:18.

There must be none among you who burns his son or his daughter alive, or who practises divination or soothsaying, no augur, no sorcerer, no one who weaves spells, no medium or magician, no necromancer. Any one given to these practices is abominable to the Eternal; indeed, it is on account of such practices that the Eternal dispossesses these nations before you.—Deuteronomy 18:11-12 (Moffatt trans.).

RELIGION has been followed all through the ages by the dark shadow of superstition. Sometimes lengthening, sometimes lessening; sometimes almost obliterated by the bright light of reason, sometimes obscuring the face of religion as by a storm cloud, it still persists and continues to cast upon our path the distorted and deceptive image of the faith we follow.

If certain of our most popular newspapers should by some unfortunate mischance be preserved to posterity the archeologist of two thousand years hence would form about the same sort of idea of our civilization as we have formed of the civilization of ancient Assyria from the cuneiform tablets. He would conclude from reading these papers that astrology was more in vogue than astronomy, that our medicine was mostly magic, that the credulity of the common people was boundless, that the practice of necromancy, divination, and other forms of witchcraft provided popular and profitable professions.

The reversion to more primitive modes of thought

that is characteristic of the post-war period shows itself in the double trend toward naturalism and toward supernaturalism. These tendencies are not opposed, as they may appear, but lead in the same direction, and both lead away from a rational religion and a sensible science. Naturalism leads to the admiration and imitation of the subhuman and subcivilized, and supernaturalism in its present form is also turned backward toward the worst aspects of paganism, instead of forward to a higher type of humanity and superior social order, as true supernaturalism should be turned.

The modern believer is disposed to repudiate the saints and prophets and to pin his faith on Sir Oliver Lodge and Eusapia Palladino. Amulets and charms are again in fashion. The ouija board rivals the typewriter in the production of literature. Palmistry is a popular pursuit. A mint of money has been made out of those who were willing to believe that the disease, sex, religion and race of a distant patient could be determined by electronic oscillations of a drop of blood or ink. Rain-making, one of the earliest of the magic arts, is today a profitable profession. Speaking with tongues, which Paul tried to eradicate from the church of Corinth, is a growing practice in certain of our sects. As David Starr Jordan says: "War lifted the lid on society, and secret actions and beliefs held in the dark now dance openly on every green."

Rosicrucianism has had a renaissance. The old Roman method of divination by the pendulum has been revived and apparatus consisting of a ball on the end of a thread is being sold for $2.00 to determine the sex of a chicken from the egg. The thirteenth seat in the

parlor car is hard to sell, and the thirteenth floor is eliminated from some of our newest hotels. Witchcraft has appeared again in the courts. In a recent French trial personal testimony and experimental evidence were brought forward in court to prove that the accused had killed people by sticking pins into their wax figures. Satan worship has become a cult and the Black Mass is celebrated in Paris. That Lord Carnarvon was the victim of Tutankhamen's curse is commonly believed. Bleeding images appear in Ireland [1] and weeping virgins in France.[2] We see pictures of them in our papers. Necromancy, or communion with the spirits of the dead, is the fashionable faith of the hour. Sir Conan Doyle, doctor and detective, has published photographs of fairies. The Great War was most prolific in miracles. Volumes have been written on the visions and legends of this war. St. George and St. Jeanne d'Arc made up their ancient quarrel and fought on the same side, as numerous witnesses attest. In 1914 it was believed by many of the French people and soldiery, and even by some of their officers, that the sudden and mysterious shift of von Kluck's forces to the east, which allowed Foch to strike at his exposed center and so saved Paris, was due to the apparition of Saint Joan with an army on the left of the invaders. The angels of Mons formed the theme of many a sermon and learned article, and the fact that the vision was traced back to a short story by Arthur Machen in a London daily did not shake faith in

[1] At Templemore, 1920.

[2] "Le Procès de la Vierge qui pleure," *Mercure de France,* Oct., 1920.

it. The 80,000 Russian soldiers who were transported from Archangel to Scotland and down through England to France early in the war, were said to have been seen by many people *en route*. One lady who reported seeing them in a railway station said she knew they were Russians because "they wore their cossacks." It seems this legend originated in the fact that the supply of Russian eggs was cut off when Petrograd was blockaded, and so the exporter telegraphed to the London house "80,000 Russians shipped via Archangel." Drake's drum was heard again on the Devon shore as it had been prophesied that it would be in England's hour of peril. Lord Kitchener's mysterious disappearance gave rise to many wild legends that still persist. It is evident that Kitchener of Khartum has joined the immortal band of national heroes whose return is expected by their faithful admirers: Barbarossa, Arthur, Roland, Drake, Charlemagne, Dmitri, Marko Kralyevich, Quetzalcoatl—I know there are some others, but I can't think of them just now.

There are various explanations advanced to explain the remarkable recrudescence of superstition since the war. Here is one by George S. Snoddy, Professor of Psychology in the University of Utah.

The present trend toward mysticism, spiritism and the occult is directly due to the instability of mind produced by the world war. When the habits of thought slowly built up by looking at the world from certain definite points of view are quickly disintegrated through intense excitement

or shifting of viewpoints, there is temporary instability and a return to the cause-and-effect sequences of primitive man; hence spiritism.[3]

But whether we can explain it or not the revival of superstition is one of the most striking and alarming symptoms of our times, especially since it seems to arise from a world-wide folk-movement. In England it is reported that "during the last ten or twelve years there has been a remarkable recrudescence of the amulet, or mascot."[4] From Germany I recently received a learned pamphlet foretelling the imminent end of the world, with illustrations in color of the sun streaked with blood and the moon darkened. A distinguished chemist in Berlin writes me:

The Wandervogel Movement is one of the many manifestations of the spiritual inquietude of our time. Since the war a wave of uncertainty is sweeping over the old world. Theosophy, Spiritualism, Mazdaznan, Yogiism and various other symptoms of mania have each a community in all the large cities. We get an impression reminding us of the time when the Old Greek Polytheism was slowly disappearing and Christendom had not yet come in. Perhaps something quite new is on the march. In two hundred years from now the world will have a very different look.

The railroad news stands sell astrologies but no astronomies. The daily horoscope is a popular feature

[3] Quoted by Joseph Jastrow in "Spiritualism and Science," in the *American Review of Reviews.*

[4] See leader on "Modern Credulity," in *Nature,* Aug. 4, 1921.

of many of our newspapers and if it is omitted from a single issue floods of letters come to ask for the missing number. Government officials, prominent politicians, and financiers are said to guide their affairs by the stars.[5] Perhaps that accounts for the way things are run.

American missionaries sent over to China and Korea to convert the heathen become themselves converted to the prevailing demonology and bear testimony to the efficacy of exorcism.[6] A writer in a leading British review ascribes the wars and violence of the twentieth century to the throng of vampire spirits of those who, cut off from life suddenly and prematurely, seek to satisfy their lust or vengeance through the living.[7] It is a gruesome picture he presents:

Think of the enormous pressure which this mass of living "dead' must exercise, is at this moment exercising, upon us! Think how easy it is to account, on this ground alone, for many of the crimes and errors of the human race! For we have the whole past of the human race encumbering us and pressing upon us; pressing upon us, not with any mere inert weight of historic precedent, but with the active force of numberless distinct, conscious, passionate personalities, all dying of hunger and thirst, so to speak, and all strenu-

[5] For an account of the alleged influence of Madame Marcia, the astrologer, on the career of President Harding see *Collier's,* May 16, 1925.

[6] See "Demon Possession," by Rev. John L. Nevius, and "Korean Devils and Christian Missionaries," by David K. Lambuth, *Independent,* Aug. 1, 1907, where quotations from the letters of fifteen missionaries are given.

[7] "Optimism or Pessimism?" by George Barlow, in *Contemporary Review.*

ously endeavouring to appease that hunger, to assuage that thirst, by taking possession of and using the still warm-blooded, still available, frames and nervous systems of the living!

The war revived the pagan practice of rhabdomancy, and the magic wand was used to find water on both sides the line. In 1920 two books were published in Paris [8] in defense of its powers and in 1921 the French Academy of Sciences appointed a committee to study it. Germany has a weekly periodical devoted to the art.[9]

The forked twig of witch-hazel and more pretentious divining rods are still much employed in the United States to discover water, oil, gold, and lost articles.

Witchcraft is a disease of the imagination, but it is not an imaginary disease. Quite the contrary, it is a serious malady and very difficult to cure, especially when it becomes epidemic. Church and state united to stamp it out four hundred years ago, but their most severe measures were unavailing. We must in justice to our ancestors remember that although there never was really any such thing as witchcraft there really were witches, that is, malignant old women and evil-minded men who believed that they had and were believed by the community to have supernatural power to persecute their neighbors. It therefore was not unnatural that the Government should impose upon such undesirable citizens the same penalty applied in those

[8] By Mager and Landesque. See *La Nature,* June 4, 1921.

[9] *Die Wünschelrute.* For the history of the subject see "On the So-Called Divining Rod," by Prof. W. F. Barrett, in *Proceedings* of the Society for Psychical Research, Vols. XIII and XV. The use of the divining rod is condemned in Hosea 4:12.

days to such minor misdemeanors as catching a hare or cutting down a tree on a private estate, namely, capital punishment. But, although not unnatural, this policy of suppression was obviously unwise, because the more witches were found guilty and executed the more people believed in witchcraft. If the courts confirmed it who could doubt it? A delusion cannot be extracted from the brain by forceps from without like a bullet. It has to be expelled from within by direct action of the patient himself. It is a case of auto-intoxication and the only remedy is auto-expurgation.

The general atmosphere is becoming so foggy with superstition that we may expect a revival of witchcraft mania and persecution to break out at any time even in our own enlightened land.

William Jennings Bryan, dying at the close of his fight against evolution at Dayton, Tenn., is thought by many to have been "mentally assassinated by the hypnotic animus of anti-Christ, expressed principally through Roman Catholic pagans and anti-Christian Jews." [10] The spread of a popular belief in the possibility of exercising a malign influence at a distance by occult power has been found favorable in all ages to an outbreak of an epidemic of witchcraft.

I recently met a young university woman who was doing extension work in a rural community where the purest Anglo-Saxon breed prevails, and who had been driven out with a shotgun on the ground that she taught witchcraft. She had been telling fairy stories to the children, and the local authorities argued that these stories were either false, in which case she was a liar, or

[10] *The American Standard,* Aug. 1 and July 1, 1925.

they were true, in which case they were witchcraft.

The last prosecution under the witchcraft law in England took place in 1904, when Sir Alfred Harmsworth, editor of the *Daily Mail*, instituted proceedings against Professor and Madame Keiro, palmists and crystal gazers. The jury found them guilty both of fortune telling and of obtaining money under false pretenses, but the judge only took into consideration the latter count and suspended sentence at that. Instead of burning witches we advertise them.

It may be thought that our proficiency in science and engineering will prevent any such recrudescence of superstition; but history does not give us hope of immunity. Magic flourished in Mesopotamia at the time the Babylonians were raising skyscrapers that alarmed high heaven. The Romans consulted the entrails of animals when they laid the aqueducts and sewers of Rome. There are today more believers in magic, necromancy, astrology, divination, and other forms of witchcraft than there ever were. They may not form so large a proportion of the population as they did in ancient Assyria and Rome or medieval Europe, but they are more numerous because the population is much greater.

Science rules in the laboratory and the machine shop. It does not yet hold sway over the mind of the people. The extension of science teaching in the public schools does not seem to have increased the liking and respect for science as much as was anticipated before it was introduced. This is an age of science but not a scientific age. David Starr Jordan of Stanford points out that:

The recent recrudescence of superstition, a striking accompaniment of an age of science, is in a sense dependent on science. Science has made it possible. The traditions of science are so diffused in the community at large that fools find it safe to defy them. Those who take hallucinations for realities; those whose memory impressions and motor dreams a defective will fails to control; those who mistake subjective sensations produced by disease or disorder for objective conditions—all these sooner or later lose their place in the line. In falling out, they take with them the whole line of their possible descendants. . . . If all men sought healing from the blessed handkerchief of the lunatic, or from contact with old bones or old clothes; if all physicians used "revealed remedies" or the remedies "Nature finds" for each disease: if all business were conducted by faith: if all supposed "natural rights" were recognized in legislation, the insecurity of these beliefs would speedily appear. Not only civilization, but civilized man himself, would vanish from the earth. The long and dreary road of progress through fool-killing would for centuries be traversed again. That is strong which endures. Might does not make right, but that which is right will justify itself as the basis of race stability.[11]

In fact the machinery of science may be employed to defeat the aims of science, as the spread of the power of Christian nations has multiplied the number of heathen. Opportunity does not insure progress. Christian missionaries like Livingstone rejoiced over the opening up of Africa by commerce and communications because they naturally and naïvely assumed that it meant the advance of Christianity. On the contrary it led to an unprecedented spread of Mohammedanism,

[11] *The Stability of Truth*, p. 57.

their most formidable foe. The printing press contributes to the propagation of superstition and obscurantism as well as to the promulgation of religion and science. In our books and magazines fiction outweighs fact by many thousand tons. Radio has given Voliva the chance to broadcast his gospel of a flat earth from WCBD, Zion City, all around the world. Radio has also afforded an opportunity for a new form of an ancient mode of divination, the *sortes Homericæ* or *sortes Biblicæ*. Instead of opening by chance a volume of the Iliad or the Bible and taking the first passage the eye lights upon as a message from heaven, the up-to-date occultist when in doubt or distress goes to the radio receiver with the eyes shut and turns the dials till he or she hears a fragment of speech or song that may be interpreted as an answer to the problem or a guide to action.

It is almost hopeless to combat a widespread wave of superstition. Its causes are unknown and its course is incalculable. It is cosmic in its scope, and no nation, perhaps no individual, can altogether escape its influence while the pendulum of the world's thought is on its backward swing. The best any one can do is to give his own brain a thorough housecleaning at least once a year, peering into every dark corner, wiping out the medieval dirt, and burning up every rag of superstition that may serve to shelter and to spread the pandemic.

Housecleaning time, when every article of furniture from cellar to garret is handled and dusted, occurs traditionally each spring. An annual purification of the spiritual nature, when we overhaul and furbish up our morals, is set by liturgical churches in Lent and by

other churches with similar regularity in the revival season following the Week of Prayer. The systematic cleansing of our bodies is placed on the calendar as a regular order of business at diurnal or at least hebdomadal intervals. But there is no set period for intellectual purification, and, naturally enough in the stress of daily work, this is neglected.

Yet it is quite as important to keep our minds in good condition as our houses, our consciences, or our bodies. A false belief may make more trouble in the world than a wrong intention. No priest or church has ever exaggerated the importance of a right creed. The only faults of the heresy hunters are in their narrow definition of orthodoxy and the strenuous methods they adopt for securing it. A little lying is a dangerous thing, especially if you get the habit. Cherish no illusions; they are liable to change into delusions. Have no blind spots in your eye except those you were born with.

Errors breed errors. They multiply like microbes, especially through neglect. A single false belief may infect all the sound facts you pile in on top of it.

It may not take so much time for the annual inventory of your ideas as you may think, but in any case it is worth doing. Take down each principle and fundamental theorem from the shelves, valuate it and see that it is in sound condition, not worm-eaten or moth-bitten or rusty or out of date. One can never know when he is going to need one of his ideas, but when he does, it must be in serviceable condition. Very few of us have so wide a range of intellectual activity that all our ideas are kept bright from frequent use. We have to go around and polish them up occasionally. Don't

hesitate to send your antiquated mental machinery to the scrap heap and to put in new. The mind is a thought factory, not a museum of antiquities.

Oh, the road to En-dor is the oldest road
And the craziest road of all!
Straight it runs to the Witch's abode,
As it did in the days of Saul,
And nothing has changed of the sorrows in store
For such as go down on the road to En-dor! [12]

[12] Rudyard Kipling.

THE USES OF ADVERSITY

Whom the Lord loveth he chasteneth, and scourgeth every son whom he receiveth.—HEBREWS 12:6.

WHEN modern science began to examine critically the ladder by which man has climbed to his present position it was found that every step was stained with blood; that life was war, and suffering the common lot of all; that animals preyed upon plants, and man upon animals and bacteria upon man, a cycle of suffering; that every species was an Ishmael; that birds and butterflies were not the careless, joyous things the poet thought them, living only for beauty and pleasure, but were engaged in a terrible struggle for existence; that the song of birds was a war-cry and the adornment of the butterfly was merely war-paint. It was found that there was awful waste in nature, waste of time, waste of work, waste of life. Of a million seeds sown by the wind only one lived. A thousand eggs were cast upon the waters to produce one fish. A hundred men labored and sweat that one might rise. It was an awful revelation, that of science fifty years ago. No wonder that it drove men insane; made them pessimists, atheists. If science had stopped here it would have been a gospel of despair.

But it did not stop; another step changed it to a gospel of hope. It was discovered that this suffering, that looked to a casual glance like an impediment to progress, was really its cause; that pain was the main-

spring of the universe; that war was the mother of all things, as the Greek had said long ago; that the rod of affliction was the modeling tool by which God created all living things; that there could have been no happiness now if there had been no suffering in the past; that joy is the offspring of sorrow, out of war comes peace and through death comes life. This changed the whole view. It put optimism in the place of pessimism. Man could see the uses of adversity.

There was a time when there was no suffering in the world. But that was when there was no life; when the earth was without form and void and darkness was upon the face of the deep. With life came suffering, which increased as life increased. Progress may be defined as increase in the capacity for suffering. A stone does not feel pain, possibly a plant does. Ancient animals suffered less than their descendants. The gigantic saurians that used to creep across our western plains were as big as a house, but their brains could have been put into a teacup. Not much chance for pain there. And finally man came, a creature built upon a new and improved plan; but his chief endowment was that he was able to suffer more. Several new kinds of suffering were invented expressly for him. He alone of all the animals suffers in anticipation of coming perils, and grieves over the errors of the past. It is the greater capacity for misery that has made men what they are. These are they who have come up out of great tribulation.

The earliest animals were built to avoid suffering. They were as big as an animal could be and walk. The sensitive parts were protected, as in our modern iron-

clads, by defensive armor as thick as could be carried; hide and scales almost impenetrable. Now these animals are all extinct. They were beaten in the struggle for existence, and by what? *By little animals with the nerves on the outside.* The animals that were easiest hurt conquered those that were most protected. Now our museums are filled with the relics of these obsolete forms, models of inventions that did not work well, as on the walls is hanging the armor of the knights of the Middle Ages, who were beaten by men without armor. The best protected animal now in existence is the clam; the least protected is the man. To try to escape suffering is not a good plan. It has been tried on a large scale, and it does not work. Don't be a clam.

There was a time when there was no death in the world. This was long after the creation of living beings; if by death we mean a definite and certain period of life. The protozoa, the simplest organisms, are immortal. They do not die a natural death, although they can be killed. These tiny specks of protoplasm grow and divide, but we cannot say that one part is the parent of the other. It is the same individual, only separated into two parts for convenience. It lives and grows as long as the proper conditions prevail; not merely for threescore years and ten, but for thousands of years. In fact, the first created speck of protoplasm is living yet, divided into innumerable parts. Later there came beings that died—spontaneously, at the end of a given time. It was apparently a great disadvantage that an animal should die when it had acquired the strength and skill of maturity, and that a new individual should have to pass through the period of helpless in-

fancy. But the animals that died progressed and developed, while those that did not die remained stationary. Death came into the world that we might have a fuller and completer life.

Now we see more clearly what is meant by the many mysterious sayings in the Bible, that benefits arise from afflictions, that good comes out of evil, and life comes from death. People used to believe these statements; yes, they were doubtless true, but in some hazy mystical sense, nobody knew how. Now we know that they are not imaginative, but plain statements of fact; they are not figurative, but literally true.

We now know something of the benefits of suffering in the past, but why do we have to suffer? We see that the whole creation groaneth and travaileth in pain till now, because it has brought forth *us*—but why does the labor continue? Here is man; intelligent man, who knows some things and thinks he knows it all; civilized man, except for occasional lapses into barbarism; man who stands erect, except when he crawls into some meanness; man with the moral law written in his heart, which he follows whenever he thinks it is good policy; man, who knows God and prays to him whenever he gets into trouble; man, proud man, looks up to his Creator and says: "Here am I, the end and aim of all the creation. I am worth all the pain and suffering that I have cost other beings, but don't carry this any further. Let us have peace."

This is no caricature. You will find substantially this view of the position of man in dozens of theological and scientific works. Of all created beings man is certainly endowed with the greatest capacity for conceit.

Where knowledge ends, faith begins. The more we know of God's dealings in the past, the better is our foundation for our faith in the future. No suffering has been in vain; so ours, too, must have its use. We are now reaping the reward of the sufferings of others. Our happiness has its roots in a soil watered by the tears of untold generations. Animals and men, innocent and guilty, have suffered for us. They gave themselves as living sacrifices for a people they were not to see, for a cause they did not know.

What are we going to do about it? How can we repay the sacrifices that others have made for us? Christ has told us. By sacrificing ourselves for others, for those around us and those who are to follow, for our neighbors and our posterity. We are to do for others what *others have already done for us*. We are to take up the cross, Christ's cross, the symbol of unmerited suffering, the emblem of sacrifice for others, and follow him.

LOOKING BACKWARD AND LIVING FORWARD

(A Baccalaureate Sermon)

This one thing I do, forgetting those things which are behind, and reaching forth unto those things which are before, I press toward the mark.—Philippians 3:13-14.

Obvious as it is, it seems strange that we are so constructed that we have knowledge only of the things that are of no use to us, the things of the past, and have no knowledge of the things that we are to use, the things of the future. We are told to look before we leap, but this, like other proverbial advice, is literally impossible to follow.

Our life is ahead of us, and this is as true of the old as of the young. Our actions, our thoughts, our intentions, our desires are necessarily directed toward the future. We have no control over the past, and so we have little interest in it. We front one way. There was a little girl who made that discovery for herself. Her mother was trying to teach her the art of buttoning her dress behind, which, I am told, is an art very difficult of acquirement. The little girl gave the reason for it. "Why, mamma, how can I? I'm in front of myself."

Now it seems a desirable arrangement on the whole, that our eyes, our arms, and our feet should all work in the same direction, that is, forward. It is only in emergencies like that referred to that it is awkward.

But when we come to consider how we are placed in time we find that it is different from space. Our action is still directed forward but our look is directed backward. It seems as if a mistake had been made in man's construction, as if his head had been set wrong upon his shoulders, like the mismatched animal we used to draw in collaboration by folding over the paper. He can only walk forward and can only look backward. He can never see where he is going, only where he has been. He wants to see the road ahead of him and he can only gaze on his own footprints, often a disheartening spectacle. I know of nothing so awkward except a man rowing a boat who must look at his wake instead of his port.

The ancients, struck by this anomaly in man's constitution, imagined beings not so hampered; the twin giants, Prometheus who looked forward and Epimetheus who looked backward; Janus who had two faces, directed toward past and future.

But while mythology was dreaming of beings better adapted to their temporal environment, science was endeavoring to overcome the difficulty by devising means by which man could get some glimpses of the road in front of him. It may be said that the intellectual history of mankind is a record of the efforts made by man to screw his head around on his shoulders so he could look before as well as after. The highest achievement of the human mind is the development of the power of prophecy. It is no wonder that we are fond of saying, "I told you so." It is the proudest boast that one can make.

Knowledge of the future is the most useful knowl-

edge we can have. Indeed, it is the only *useful* knowledge we can have. Reading history is as unsatisfactory as reading a guide book to Japan when we are going to Switzerland. There is no guide book to that unknown land into which we are to travel. We would prefer to read history of the United States from 1926 to 1976, rather than any other period since the world began. Our own biographies would be more interesting to us than the biography of the greatest man who ever lived. But the history of the period 1926 to 1976 is not to be studied by us. It has to be made by us. All the world's a stage and we come on to this stage with our parts unlearned, with no knowledge of our cues, with only a faint conception of our own rôle or the rôles of the other actors, for we have never heard the plot of the play and never have had a rehearsal. If under those circumstances we can make a creditable appearance and performance, what skillful actors we must be! The drama of life requires a nimbleness of wit like that of the early Italian plays, where parts were assigned but the dialogue and action had to be extemporized.

You can buy today's paper for two or three cents, get yesterday's paper for nothing. If you could buy tomorrow's paper for $100 you would jump at the chance. It would be a better bargain than today's paper at two cents. Let us assume that you have a chance to buy tomorrow's daily. Not a whole and perfect copy but a scrap, a part of a page, not a well printed copy, but a smudged and almost illegible imprint, not absolutely accurate either, but, like yesterday's paper, containing many false statements and mistakes. Even that

would be worth something, would it not? Well, that is about what you can get now. For our newspapers are now part of prophecy, and some of it true prophecy. The paper today tells what the weather will be tomorrow, and it hits it right about eighty per cent of the time. It tells us when the sun will rise and the tide will fall to the second. It tells you what meetings and dinners are going to be held, generally correctly. It tells whether stocks are going up or down, though I do not advise you to place any financial dependence on that. It tells you which party is going to win in the next election and is right half of the time. It even goes so far as to foretell what sort of clothes the ladies are going to wear next season, which has always seemed to me the most wonderful manifestation of the power of prophecy.

I do not mean to exaggerate the prophetic power of editors. I would merely call your attention to the fact that it is a part of the journalistic work and the most important and the most difficult part of it. A paper or magazine that is always foretelling things that do not come to pass is discredited, or ought to be more often than it is. A periodical is of value to us in so far as it is able from the fullness of its information and the prescience of its editors to give some idea of what is likely to happen. Some things are and always will be beyond the power of the wisest men, even editors. It is easier to predict big things than little. It is easier to predict consequences than causes. No one predicted long in advance that a Serbian fanatic would assassinate an Austrian archduke, but many predicted the war.

Men who have done most in the world have been the men who had that insight which is foresight, who could read the signs of the times and reason from cause to effect, men who could screw their heads around a little more than the rest of us and catch a glimpse of what is before us. Such a man can use his power for self-advancement or for the benefit of all. He may bet on the races, or speculate in real estate or go into politics, and win fortune or fame for himself. Or he may become a public prophet, working for the public profit, if you will permit me to put it so, telling people what good results will come from the adoption of a certain policy, or, warning them of the evil consequences of present tendencies, more often the latter, for somehow it is always easier to prophesy bad fortune than good.

The earliest records in Egypt and Chaldea, painted on papyrus or stamped on clay, show that at the very beginning of civilization men's faces were hopefully turning toward the future, too hopefully in fact, for it has taken many thousand years of steady thought and observation to clear away the rubbish they heaped up, to find out we don't know so much as they thought they did, the soothsayers, and magicians and astrologers of old. But we should do honor to these wise men of Chaldea and Egypt for what they tried to do and what they did. They were the first scientists, for the essence of science is prophecy. Think what a bold act of faith that was to be the first to assert that 2 times 2 will make 4—not have made 4 or make 4 but will everywhere and always and for all. And then that unknown genius who made that still higher flight into the unknown and boldly announced his belief that 12 times 12 would

make 144. He made good, and mankind thereby stepped upward to a higher plane, standing henceforth upon the multiplication table.

Now among the clay tablets that record these wonderful things about numbers and equally strange things about angles and squares and circles, are found other prophecies of varying value, telling how long next year would be and when the next eclipse was coming; also directions for finding out when the king was going to die and who was going to beat in the war. This is where these ancient seers went astray. They were tempted to pretend to know more about the future than they did, even as you and I are tempted now. The king and the common man did not care so much about the next eclipse as about how to make money and whether she would marry him or not. So the wise men of the East applied their astronomical knowledge to the affairs of men and it did not work, but they pretended it did because it was profitable. It was found that men did not move in simple orbits like the stars. So their science was split into two parts; astronomy, the part that worked and that we have kept to this day, and astrology, the part that did not work and nobody believes in now except those who are still living in the Chaldean age. But don't blame the astrologers for trying to foretell deaths and marriages as well as eclipses and conjunctions; only blame them for holding on to the idea after they knew it would not work. Let me here give you a piece of practical advice. Look out for two things—*pick up an idea at the right time and drop it at the right time.* Just follow this simple rule and you will get along all right. The seers and augurs

made a mistake that is often made yet, when a man thinks that he can explain all of biology by the laws of chemistry and all of sociology by biology. They made this common mistake of carrying a thing too far.

Science, then, had its origin in the effort to predict the future; and that remains its present purpose, its reason for existence. There is a strong contrast at this point between the temperament of the scientist and that of the historian or, let me say rather, the antiquarian; for a historian may have the scientific temperament. Both are inevitably confined to the study of what has happened, but the scientist picks out from the multitudinous records of the past only what seems to him likely to be repeated in some similar form in the future, while the antiquarian is interested especially in what can never happen again. The antiquarian values things according to their rarity. The scientist values things according to their commonness. The antiquarian values a book that is unique, an event that is unique. The scientist has no use at all for an event that is unique, if there can be such a thing. He is searching for the common element in the rare objects he is studying; the common factor in all happenings. Poincaré says that mathematics is the art of giving the same name to different things. The more universal a law, the more highly it is prized. Newton is esteemed one of the greatest scientists because he discovered the greatest commonplace, the law of gravitation that drops an apple on a man's head and pulls the planets into their orbits. Iron is the commonest thing in the world; that is why it is so valuable. Water is worth more than wine. The diamond is the least valu-

able form of carbon. Wisdom is more to be sought than rubies and fine gold, because when it is found there is always enough of it to go around. Nobody can monopolize it.

The antiquarian seeks the exception. The scientist seeks the rule. The antiquarian wants a variety. The scientist wants the common weal. The antiquarian searches for a curiosity. The scientist has a curiosity that makes him search.

This distinction between the historical and the scientific point of view is important because it lies at the basis of the mutual misunderstanding and mistrust, sometimes rising to the point of antagonism, between these two wings of a college faculty. The historian seems to the scientist to value facts for their own sake, while the scientist goes after the facts that seem likely to have a bearing upon some universal principle that may be applied in the future. A glaring example of the extravagances of the antiquarian spirit is to be found in the article on "Typography" in the *Encyclopædia Britannica,* where twenty pages of its valuable space are taken up by a discussion, based upon an enormous amount of scholarly research, of the claims of Gutenberg and Coster for priority in the use of movable type. Of course no one can tell what fact may turn out to be significant, but I confess I cannot conceive that finding out when or where or by whom the first page of type was set could have any possible bearing on what history can teach us about the nature and destiny of the human race. It is too late to apply for a patent on printing. Printing is one of the most important factors in the history of the world, but do we

really need to know anything more about its origin than that "books printed from movable type were published in Germany and the Netherlands about 1445-1455"?

The difference of attitude between the scientist and the historian is admirably illustrated by Poincaré, the French mathematician:[1]

> Science is built up with facts, as a house is with stones. But a collection of facts is no more a science than a heap of stones is a house.
>
> And above all the scientist must foresee. Carlyle has somewhere said something like this: "Nothing but facts are of importance. John Lackland passed by here. Here is something that is admirable. Here is a reality for which I would give all the theories in the world."[2] Carlyle was a fellow countryman of Bacon; but Bacon would not have said that. That is the language of the historian. The physicist would say rather: "John Lackland passed by here; that makes no difference to me, for he never will pass this way again."

Antiquarianism is exclusive; science is democratic. The one treasures; the other shares. We can see the effect of the antiquarian spirit most conspicuously in the sale of old books and objects of art. The first and poorest edition brings more than the latest and best. An only copy of a book that is not worth republishing may sell for thousands of dollars. The trick of the Cumæan sibyl, who burnt part of her books to raise

[1] *Science and Hypothesis,* p. 127.

[2] I think Poincaré refers to the passage at the end of Chapter I, Book II of Carlyle's *Past and Present,* but he does not quote accurately.

the price of the rest, has become a common business practice. The purchaser of an etching receives with it a scratched print, showing that the plate is destroyed, so he can rejoice his poor selfish soul that only forty-nine or ninety-nine other persons in the world can have the same pleasure as he.

But monopoly and antiquity cannot really add to the value of a picture or a book, although they may raise its price. The only proper way to value books, pictures, and everything else, is by reference to the future. That is the scientific method, the business way. The historical method is to consider what has been the interest and influence of a book. But real practical pragmatic present-day value may be quite different from the historical value. Some works of art grow old; some grow young. Some lose value, some increase in value, not merely in antiquarian value through age and rarity but real value based on present and prospective usefulness. So we call them immortal works. They flow like perennial springs.

This may be due to the genius of the author, or it may be due to a misinterpretation of him—no matter which it is. A book is of value for what we can get out of it, which is often something much better and finer than what the author put into it. Exactly what the author meant we sometimes cannot find out and usually we do not care. We are entitled to all we can read into it. Don't take a man's word for what he has accomplished. Don't take any man's word for it. Wait and see. We credit Columbus with discovery of the New World, and rightly. But in the eyes of his contemporaries, he was a failure, because he did not suc-

ceed in what he tried to do, reach India by going west, but accomplished something very much greater.

Real market prices are always prospective. If you want to learn how little past value has to do with present value, try to sell off some of your books, your furniture, or your clothes, and see how little you get for them. For what you sell with your old clothes is the wear that *can* be got out of them; not the wear that you *have* got out of them, for that account is settled and closed. We are all of us dealing in futures. It is the only legitimate business. A merchant when he takes an inventory of his stock does not go to the bills and mark everything, say ten per cent above what he paid. No, he marks some a little above, some a great deal above and some below their cost. He prices them at what they will bring as nearly as he can guess. If he does not guess right he goes into bankruptcy. The restaurant keeper must be able to tell in advance with considerable closeness how many of his chance customers tomorrow will choose apple pie and how many will choose mince pie. He must know it better than the pie-eaters themselves. The gents' furnisher must guess how many men will come into his shop next week and what is the size of their necks to a quarter of an inch. If he is very far wrong in his figuring on futures he will lose money by stocking up with goods that he cannot sell or running short of goods that he might have sold. For the business man must be a prophet if he is to succeed, so must we all of us if we succeed in anything. And other things being equal our success will be commensurate with our prophetic powers. For in order to do right we must see right, and that involves seeing

the end from the beginning. Teleology is the aim of all the ologies.

What is true of material things is no less true of the intangible things that we inherit and transmit; language, science, customs, political institutions, the forms of religion, their real value is their future value. We must be constantly revaluing them, marking them over as a shopkeeper does his goods, sometimes higher and sometimes lower.

But we neglect to keep our price current up to date. We fail, through timidity and laziness, to reappraise the goods we have inherited from our forefathers. Each generation bequeaths to the succeeding things far more costly than houses and lands—such things as words, ideals, conventions, art, literature, laws, many of them very precious in our sight, for we have purchased them with toil and blood. But what they will be worth to you of the coming generation, you must find out. Don't be too hasty about the decision. Don't mark down the goods simply because they are old, because, as I have been trying to explain, age has nothing to do with fixing values. But on the other hand don't neglect to submit your inherited property to the process of revaluation. It is a terrible responsibility that is being placed upon you as you enter into the heritage of our civilization, the accumulated wisdom of the ages. I must confess that we elders entrust it to you with a good deal of hesitation and apprehension. We would not do it if we could help it. We hand over the old blue china teacup we have kept in the corner cabinet with fear and trembling lest you drop and smash it. You are such careless children. You do not seem to appreciate as much as

you might some of the things we have worked hard for. So we are going to hold on to things till we have to let go and in the meantime give you plenty of warning and impress upon you so far as we can our own sense of values. But we realize after all that it is you who must determine for yourself what of all we give you, you will keep, and what you will replace with novelties.

But my object in talking to you today is not merely to impress you with a sense of responsibility for the task of the revaluation of civilization that you must inevitably assume. My object is rather to give you the rule for the valuation of all things; and this is, *find out if you can, what the things are for.* Look to the future, rather than toward the past, for the explanations you want.

When you were children—if you were the normal and intelligent children I presume you were—you ran around asking "Why?" about everything. It is a good habit. I hope you have kept it up ever since and will keep it up through life. But maybe like most of us you have in large part given it up in the course of years. You probably got tired of asking "Why?" because of the unsatisfactory nature of the replies. Sometimes you did not get any and sometimes you got only half the answer, which is about as bad.

For all the problems of life have two answers, like quadratic equations, and it is of the highest importance that you get both of them. "Why?" is really a double question in one word. It means both "How comes it?" and "What for?" Of these two answers, one, you see, is to be sought in the past and the other in the future. One is the *cause* and the other the *reason.* Why do you

eat? Because you are hungry. That is one answer; that is the cause. Because you will gain strength for the future. That is the other answer; that is the reason. Why do you sleep? Because you are sleepy; yes, but also because you want to get rested. Why do you exercise? The cause is the momentary pleasure of it; the reason is the future benefit. And so it is with all the desires, affections, and passions of life. They have their reasons as well as their causes, and to ignore them is to become sensuous and materialistic.

Our code of morality has this double sanction of past and future. It is anchored like a ship in the harbor, fore and aft. If either anchor chain breaks the ship swings and is in danger of floundering. Why do this, or why not do that? There are always two answers. You ask a child "Why don't you play with the fire?" and he may answer, " 'Cause mamma told me not to." It would be a correct and, so far as he knows, a complete answer. Yet it is only half the truth. "Because he would get burnt" is the other answer. The causal answer is the mother's command, and this is all the child knows. The rational answer, which as always lies hid in the future, the child may have to find out for himself by painful experience.

Why not tell a lie? Here again split up the "Why?" into its two objects. One answer is to be found in the past, implied in the Ten Commandments. The other answer, that of the future, you have doubtless divined if you have had much to do with people who told lies.

But it is not always so simple. In regard to most of our morals we are still but children. Somebody has told us not to do something, but has not given us the

reason. We know that it is best to obey, but not exactly why. Probably we shall never know altogether. We get rapped over the knuckles by church, state, and society for doing this and that, and when we ask "What for?" they can't tell us. But don't get to thinking that there is no reason because nobody knows the reason. Reasons are hid in the future and the wisest of men cannot see very clearly into the future.

There is a stage in the development of some young men and women, perhaps of all, when they begin to see the causes of things and do not yet catch sight of the reasons for things. It is called the period of disillusion. The child accepts things naïvely, as they are, at their face value, without asking Wherefore? or What for? But as he grows older he begins to wonder and inquire about the origin of things. The reply " 'Cause 'tis" no longer satisfies him. The age of inquiry is followed by the age of skepticism. For the youthful inquirer gets as his first answer to his questions the cause, not the reason. This is natural, for the cause is easiest to grasp. We are nowadays learning the causes of much of what we see and do, thanks to modern science, but we yet know very little about their reasons. We cannot hope ever to know much about the latter. How mankind came into existence, the study of evolution has done much to explain. Why mankind came into existence, evolution does not yet explain at all and never can explain altogether.

So when the young man or woman begins to inquire seriously into the meaning of life he takes the first answer he gets for all the answer there is. He is not always to blame for this, for sometimes his teachers,

who are employed for the express purpose of answering his questions, do not give him any other answer, or even intimate to him that there is any further answer to be given. So he gets an idea that he knows it all and acts accordingly. He discovers that the flag is but a piece of cloth like any other and calls it so, thereby shocking his soldier friend, who risked his life for it. He traces back marriage to a primitive stage of capture and slavery and declares that that is all it amounts to now. He reads up on the early history of religion and it brings him into a mess of superstitions and tyranny, so he will have nothing to do with it. He turns every coat inside out and discovering that it has a seamy side insists upon wearing it that way. He makes the discovery—and believes that he is the first ever to have made it—that our manners and customs, our political and religious ideas, our social and business forms, are largely built up on conventions; thereupon he denounces them all as "the conventional lies of civilization" and would return to savagery, until he learns that the savage has more conventions and conventions of more absurd kinds than we.

The child who cut open his drum to find out what it was made *of*, found out, but forever lost the possibility of finding what it was made *for*. This is, as I said, a dangerous stage to one passing through it. It is ruinous to one who never finds his way out of it. He becomes a materialist and a pessimist; unable to contribute to the progress of humanity because he cannot conceive of progress. To understand progress, still more to take part in it, requires the ability to look forward. The materialist is a statist. He is more con-

servative than the conservatives, for he does not admit the idea of change. If property was robbery in the beginning, property is robbery now, he assumes. If marriage was slavery, marriage is slavery. If government was founded on force, government is founded on force. If religion was superstition, religion is superstition. If a man was a beast, man is a beast. And so on to the end of the chapter.

Such a man is blind to the future because he is looking backward. Now in looking backward he can sometimes tell what things were, rarely what they are, and almost never what they will be. He is blind to the better part of our literature as he is blind to the essence of our civilization, for the language of the higher passions, of patriotism, love, and religion, is necessarily conventional, symbolic. This is because the higher passions and the deeper emotions cannot be fully expressed in any language yet existing. So the poets and the prophets have to speak in a foreign tongue, using our words, but not in the literal and ordinary sense, because our words are not suited to them. They have to invent a language of their own, because they look to the future, where lies their reason. They need a language of the future and even Esperanto will not do. The better part of theology is eschatology. All true religion is prophetic, all true art is prophetic, all true science is prophetic, all true politics is prophetic. They all have their eyes fixed on something seen afar, invisible to common gaze and not to be described in common language, which can only describe things seen and known, that is, things past. All true love is prophetic. Why does a young man fall in love with a particular

girl? Is it the shape of a nose, the curve of a lock of hair? It means more, a lifelong companionship, the founding of home, the raising of family.

It is therefore absurd to ask people to say exactly what they mean; they cannot when they mean very much. It is only our trivialities and commonplaces that can find language perfectly adequate to their expression. We can tell the whole truth only when there is not much to tell. We cannot afford to take words at their face value any more than we can take men, theories, and institutions at their face value. Sometimes they mean more, sometimes less. Do not think that you can get their real value by their history. You cannot always tell what a word means by tracing it to its origin. You are getting further away from its meaning the further back you go. The cause is not the reason. The answer to a problem is found at the end. The moral to a fable is found at the end. The point to a joke is found at the end. So whether life is a problem, a fable, or a joke, its meaning is to be sought in its end.

This distinction between the cause and the purpose of things, between how-comes-it and what-for, is original but not new. After I had thought it out for myself, with more hard thinking than you would suppose, seeing how glibly I talk about it, I happened to turn to Plutarch's "Pericles" and found that he had stated the point clearly in the following passage:

> Now there was nothing in my opinion, to prevent both of them, the naturalist and the seer, from being in the right of the matter; the one correctly divined the cause, the

other the object or purpose. It was the proper province of the one to observe why anything happens, and how it comes to be what it is: of the other to declare for what purpose anything happens and what it means.

But I am glad I did not read Plutarch till after I had worked out the idea for myself because I would not have appreciated its tremendous importance in the interpretation of nature, ethics, and religion. We have nowadays many more naturalists than seers. Seers were never more needed. Darwinism has not, in my opinion, banished teleology from biology but has merely buried it deeper. Bergson in his *Creative Evolution* is one of the seers who are trying to dig it up again.

Allied to the mistaking the cause for the reason is mistaking the material for the object. What is a statue? It may quite justifiably be called a block of marble. It can be weighed as such by the physicist and analyzed as such by the chemist. Its remarkable form can be completely accounted for by the chisel strokes of the sculptor, these by the blows of the hammer, these by the power of the muscles, this by the potential energy of the food eaten, this can be traced back to the radiant energy of the sun; this establishing a complete causal chain, mostly well understood. It might be argued by a materialist that there was no room for anything else, that everything was accounted for. So it is, except the most important thing of all, what the statue is for, what the sculptor meant by it. These physical and chemical investigations have not helped us in the least to understand the meaning of the statue. They have perhaps actually hindered us from

the perception of its significance by absorbing our time and attention and leading us all the time in the wrong direction; into the past, not into the future, where the meanings of things are to be found. The question "What for?" should not be put to the past. "For" is part of "forward."

For man lives forward. He alone has the power of prevision. He plans for years; builds for centuries in advance; sacrifices himself for the benefit of generations to come. He alone has visions of a distant future, of a Utopia upon earth, or of a city not made with hands, eternal in the heavens.

Now man is not peculiar in working for the future, but he is peculiar in knowing that he is. The bee storing up honey in the comb for the days when there shall be no more flowers, the bird making a nest for eggs yet to be laid, they are obviously working for the future, but it is not due to their own forethought. In the case of the instinct of insects and birds there is apparently also prevision, but it is not their own prevision. It seems that the world as a whole has this characteristic of prevision which is characteristic of the highest human intelligence. That is, in the world order man recognizes something working that is akin to his own mind but manifestly greater and more knowing and farther seeing, and to this he gives the name of God. Providence means literally "seeing ahead."

This gift of prevision, of foresight, which man in some degree possesses, has in all ages been recognized as the most divine of his faculties, for it is most like the teleological constitution of the cosmos. Because men have this gift they can set up for themselves goals

in advance of their times, higher ideals to be attained; and then strive for them consciously and consecutively. That is to say, the motive power of human actions may be set in the future instead of the past. We see a horse go faster as it is going homeward, and we say that is an intelligent horse; so it is. He is not being driven but led, and led by an unseen motive, oats ahead, not whip behind. That is a sign of intelligence, *the* sign of intelligence, in fact. You can judge of the intelligence of a man in the same way, by whether his motives are ahead or behind. It is more noble to be moved by a pull than by a push.

The true object of education is the cultivation of this faculty of prevision. If you young people have been properly educated you have had your heads turned. A college is a "school of the prophets," quite as much as that mentioned in the Bible. You young men shall see visions and you young women shall prophesy. And they will not be vain imaginings because you will know how to make them come true. You have learned from your study of science to have faith in the validity of nature, in the constancy of law. You have been taught in your historical studies what can be accomplished by human exertion and how it should be undertaken. History is like a chauffeur's mirror, set so as to show the road behind, but with the view of telling you what is coming. You should now be able to see the outcome from the beginning. You are expected to be able to tell a current from an eddy in the tide of the affairs of men. You should know how to tell a fad from a reform. As a gardener knows the difference between weeds and flowers when the first cotyledons appear

above the soil, so you should know the difference between profitable and detrimental social movements as they spring up. You should be able to distinguish between a rising statesman and a false alarm.

This evaluation of new ideas and persons is much more difficult than the revaluation of old things of which I spoke a while ago, and it is also much more important. Princes are always in disguise, in the real world as in fairy books. We entertain angels only unawares. Great causes appear among us incognito. The kingdom of God cometh not with observation but as a thief in the night.

INVERTED HYPOCRISY

Abstain from all appearance of evil.—I Thessalonians 5:22.

THERE is a vice, widely prevalent, very deleterious in its effects, yet rarely condemned by moralists; so rarely in fact that it has had no proper name given to it. Perhaps the nearest we have to a suitable designation is that of "inverted hypocrisy," first applied to Dean Swift by his friends when they discovered how much piety and benevolence he concealed under the cloak of skepticism and malice.

Ordinary hypocrisy consists in pretending to be better than you really are. Inverted hypocrisy consists in pretending to be worse than you really are. The inverted form is more injurious both to the individual practicing it and to his associates than is the ordinary. If one assumes a virtue when he has it not, he raises the moral standard of the community and the ideal of human nature to the extent to which his profession is credited by the people who know him. When one falsely confesses a wicked deed or a mean motive he is lowering the moral tone of society in so far as he is believed. The sin of the deception is the same in both cases, but since the evil in our own nature delights to recognize its counterpart in others, we are more apt to assume the truth of the ignoble profession than we are the claim to virtue. The reflex action upon the individual posing as saint or sinner is also very im-

portant because one inevitably and unconsciously tends to become what he habitually pretends to be and is generally regarded as being.

The amount of lying that a man will do to prove that he has been a rogue is appalling. It is a vice common to the prayer meeting and to the saloon. The convert who proclaims that he has "broken all the ten commandments time and again, year after year," may, after all, be only breaking that against lying. In Shaw's play of "Major Barbara," the repentant sinner brought in much revenue to the Salvation Army by telling how he used to beat and kick his poor old mother, until the appearance on the scene of the indignant lady in a belligerent state of mind compelled him to retreat and retract, and freed him at one stroke from the burden of his fictitious sins. The practice of confession offers an insidious temptation to overindulgence even beyond the limits of truth. Like Topsy, it is hard to stop when we get started. It requires great moral restraint at times to avoid becoming an inverted hypocrite.

That one's motives for adopting this perverted form of moral prevarication are often creditable does not, of course, excuse it or neutralize its evil consequences. Whether it is modesty, cynicism, an abnormal sense of one's own unworthiness, a desire not to be peculiar, or the fear of being taken for a prig, the practice of wearing one's clothes seamy side out and putting the worst foot forward has deplorable effects. A man who "never does a proper thing without giving an improper motive for it" is apt to be an undesirable citizen. We measure up by the height of our companions, and what lowers

them in our sight lowers us in reality. In a pine forest all trees grow tall.

We should do unto ourselves what we would have others do unto us, that is, credit us with the highest motive for our actions. Why we do things is often quite as inexplicable as it is why others do them, but if it is necessary to adopt an interpretation let us give our good angel the benefit of the doubt. When we are caught giving ten cents to a street beggar we begin to apologize for the act, which, however unwise it may be, is certainly creditable in itself. We say, "I couldn't help it; I am so constituted that I must give money to the poor," thus throwing upon Fate or heredity the responsibility for our virtues as we commonly do for our vices. Or we say, "I did it from a purely selfish motive; I should have felt uncomfortable all day if I had not," which is a fictitious assumption of inverted hypocrisy, because it is indirectly boasting the possession of an ingrained benevolence of character and an active conscience.

The employer who voluntarily cuts down the hours of work takes pains to state publicly the fact or the fiction that his hands will do more in eight hours than ten. If he provides lunch rooms and resting places for the girls he is careful to explain that it saves time and increases their efficiency. If he puts up model tenements he always professes to do it as a profitable investment. This disguised philanthropy is so common that it has been given a special name, "three per cent charity."

Inverted hypocrisy is more common among men than among women. Women generally disguise their vices

rather than expose and exaggerate them. A boy will boast of the number of cigarettes he smokes, so many that his doctor has warned him that he will die in a year unless he stops, but no girl will admit taking cold from thin silk hose and pumps. Still women may often be observed to affect cowardice in order to stimulate masculine gallantry. And I have heard ladies who have given away some piece of valuable clothing tell their friends that they never did like to wear it; it was not becoming.

In the minor forms of inverted hypocrisy which belong to the realm of etiquette rather than ethics, there is apparently a tendency to improvement. An affectation of inability to sing or speak in public, once almost a requirement of politeness, is now discountenanced. It is not regarded as consistent with true sportsmanship to underrate too greatly one's own skill at golf or chess.

This gives ground for some hope that the more objectionable manifestations of the vice may likewise be eliminated by public opinion. The time may come when alumni returning to their alma mater will find other methods of ingratiating themselves with the undergraduates than by telling tales of their college pranks and misdeeds which, if true, would be ground for depriving them of their degrees; and when men, in order to prove themselves no better than other people, will not invent a "past" or steal sins from printed books like Kipling's Tomlinson.

Many a man has been discovered by accident or death to have been leading a double life; professedly idle and frivolous, really industrious and serious; or posing as a hard-hearted miser, really self-sacrificing

and charitable. In such a case it is a question whether his secret goodness has been sufficient to overcome the evil influence of his bad example. Beware of sheep in wolves' clothing.

If a man refuses a drink of whisky it is rarely admitted to be from a preference for sobriety. He thinks it necessary to profess a dislike for the taste or he invents a fictitious physician to prohibit his indulgence. He prefers to "own" to a weak stomach than to a strong conscience.

A decent man in lewd company will sometimes match the stories of amours with fictions of his own in order to escape the imputation of piety. "Abstain from all appearance of virtue" is the motto of many men.

A soldier comes back from the war with medals. But he will not submit to any imputation of courageousness. According to his own story he went over the top from sheer cowardice, from fear of being laughed at. He enlisted in the first place, not from patriotism, but because he happened to be out of a job at the time and wanted a bit of adventure.

Such modesty would not matter if people, especially young people, were not deceived by it and come to believe that no one acts from moral motives. To deny good motives is to extend the scope of bad motives. To minimize virtue is to exaggerate evil.

The man who pretends to know more than he does is a very disagreeable person to associate with, but he is not nearly so exasperating as the man who pretends to know less than he does. You may be able to learn something from the pretentious individual, but one who affects ignorance has you at a disadvantage, and is

liable to lead you into making a fool of yourself through thinking he is one.

This inverted hypocrisy of the intellect is one of the cultivated vices of the age. In some of its forms it is affected by women even more than men. There still exist women who think that men are fond of simpletons and apt to choose them for wives. A young man showing a feminine friend about the city in the evening stops for a moment before the open door of the power house of the trolley line and points out the big dynamos. She exclaims: "Electricity is all *so* mysterious. I've tried and tried, but I never *could* understand how those things worked." Her escort knows she is mistaken, and suspects she is lying, because a dynamo is much less complicated than a steam engine, over which she would have exhibited no astonishment or perplexity. If he is in a tolerant and good-natured mood he expresses a polite regret at her mental incapacity and passes on. If he feels a bit malicious at being expected to swallow so silly a remark, he offers to explain its workings, and she, realizing that he has caught her, either refuses to listen, thereby confirming his suspicion, or, after listening, thanks him gravely, for thus telling her that which she knew before or did not wish to know at all. If she had told the truth in the first place that she had never studied the subject, or was not interested in it, or did not think it worth while, or was too lazy, she would have kept a larger part of his respect.

Formerly travelers in foreign lands professed to know all about the history, art, and literature of the places they visited, and they complimented the reader by as-

cribing to him equal omniscience. Nowadays they write books to display their ignorance and to boast of their inattention. In the old-style book we would read: "Everybody knows the story of the reconciliation between Emperor Fred. Barbarossa and Pope Alexander III effected here on 23d July, 1177, through the mediation of Doge Seb. Ziani, commemorated by these three red slabs." In the modern volume of travel sketches we should find: "The guide pointed out some red stones in the porch and said something happened in there sometime, but I did not pay any attention to what he said, and it is too much trouble to look it up." If a man has not enough energy even to copy from Baedeker, he ought never to travel, still less to write about it. No doubt the second writer knew as much about Pope and Emperor as the first, but he preferred to affect a shallow pretense of ignorance, idleness, and indifference. So the volumes with mock-modest titles continually swarm out from the presses: "The Roundabout Rambles of an Absent-Minded Man," "The Log of a Lazy Voyager" and "Sight-Seeing by a Blind Tourist." Now if any man has information to give let him give it and with as little condescension as possible; but we have ignorance enough of our own without buying it at the rate of three dollars a volume.

All branches of art are impeded in their progress by this hypocrisy of incapacity. The people are too docile. If they are told that they ought to admire certain paintings or poems or music, they dutifully do so. If they are told that certain others possess recondite virtues only to be appreciated by a few gifted and well trained minds, they accept that also and meekly admit

their incapacity. A few years later, after the connoisseurs have tired of their pretense of esotericism, the work of art is taken from the sacred shrine and given freely to the people, who straightway discover that it is not hopelessly above their heads after all. It takes its place among the other idols of the market place and attracts a proper number of sincere worshipers.

Who complains of the obscurity of Browning nowadays? Anybody can read him without regarding it as a literary feat. This is not due to the labors of the Browning Society in supplying lexicons, keys, elucidations, and diagrams, nor does it prove that the schoolboys and schoolgirls of today are smarter than their parents. It only means that the ban is off. Meredith's novels become comprehensible just as soon as one by one the copyright drops off and they come out in cheap edition. Ibsen's plays, once the monopoly of the elect (self-elected), now are found too simple to brag about. A quotation from the Rubaiyat no longer serves as a password of the Society of the Illuminati. It is too common to use even as the title of a short story in a Sunday supplement. The superstition of incomprehensibility still shadows Henry James, but it will not last much longer. Before long we shall discover that the few who profess to be able to understand all he has written and the many who profess not to be able to understand anything he has written are equally false in their pretensions.

On summer afternoons the band in the park plays Wagner between Verdi and Sousa. The crowd frankly enjoys it and applauds. Nobody stops his ears to shut out the horrid cacophony that shocked our parents.

Nobody puts on a mystified and baffled expression. What we call the elevation of popular taste consists principally in inducing the people to reveal their taste instead of masking it under the affectation of incapacity.

Inverted hypocrisy, whether of mind or morals, undeniably exerts a bad influence on the whole. On the other hand there is much to be said of its converse, the normal kind of hypocrisy, even though it is classed among the vices instead of the virtues.

How far a man can keep himself in physical health by assuming that he is well is a disputed question. Christian Scientists have gone to extremes—but we all say that "there is something in it." At least we acknowledge that a man seriously impairs his health by thinking himself diseased.

We know that in the moral sphere this method will go further than in the physiological. "Assume a virtue if you have it not" is sometimes good advice. To profess moral health is unquestionably more wholesome than to assume moral disease. A man who sets up a false reputation for himself may by that means acquire a real character. The pretense may become an actuality, the fiction become a fact.

"What I aspired to be and was not, comforts me," says Rabbi Ben Ezra.

An ingenious French writer, Jules de Gaultier, has built up a philosophy of ethics based upon the assumption that hypocrisy is not a vice but a virtue, in fact the chief of virtues since it is only by means of it that moral advance has been made. According to this theory, which he called "Bovarysme"—from Flau-

bert's Madame Bovary—man sets himself up as a model of what he would like to be and does in that way come nearer to his ideal than he was or than he otherwise would be. A nation believing itself, however erroneously, the most courageous or enterprising people in the world may in course of time actually become such.

It is, says Gaultier, by means of the power of affirmation, of assuming an ideal and so converting it into reality, that man has made all his ethical progress. The "Moral Myth" of Gaultier corresponds to the "Social Myth" of Sorel, who has made it the mechanism of social progress.

But can that be called a myth which is but the first step to reality? When an architect wants to build a house he draws a picture of it, green trees, pretty flowers, children playing politely. That is a myth, a piece of hypocrisy. No such house exists on the lot—but were it not for the picture the house would never be built.

James's "Will to Believe" applies not to "impossibilities" but to unrealities, which may be made actualities if we desire them strongly enough and have faith in their possibility. It is only by reaching out his oars in advance of the boat that the rower can make progress. Vaihinger in his *Philosophy of "As If"* (*Als Ob*) makes this the basis of a complete and elaborate theory of social progress.

We must admit that it is wrong to be a hypocrite for the purpose of deceiving other people. But is it wrong to be a hypocrite for the purpose of deceiving oneself? Is it altogether a disadvantage to see yourself, not as

you are, but as you would like to have others see you? When you are learning to swim or skate, your instructor keeps telling you that "you can do it," that "you are doing splendidly." He is lying, if you like, but if he can make you believe his lie it will cease to be a lie and become a truth.

We must beware of carrying over in to the realm of psychology the laws of inanimate nature. Wishing and hoping and believing that the weather will be better tomorrow will make no difference with it, but wishing and hoping and believing that you will be better—or worse—tomorrow may make a difference.

At any rate if you are going to do any pretending, be sure you pretend on the right side. It was not altogether a gain when Christians ceased to call themselves "saints." Some of them really became what they all professed to be.

TELLING THE TRUTH

These are the things that ye shall do. Speak ye every man the truth to his neighbour; execute the judgment of truth and peace in your gates: and let none of you imagine evil in your hearts against his neighbour; and love no false oath; for all these are things that I hate, saith the Lord.—Zachariah 8:16-17.

THESE phrases sound like platitudes to us. It seems so obvious and necessary that God should be a lover of truth and a hater of lies, and that he should wish us to be like him in this respect. But when we study comparative religions we find that our God is not as other gods; that truthfulness is not regarded by most nations as an attribute of deity. The gods of our ancestors, Woden and Thor and Loki, were not truth-tellers. The gods of the Greeks and Romans, Jupiter, Juno, and Minerva, were exceedingly skillful in lying through constant practice. Indeed, there was selected a special god of lying, and any man, who wanted divine assistance and guidance in some important lie he was about to tell, could to this end offer his prayers to Mercury. Among the multifarious gods of the Hindu there is not one god of truth, but all of them set examples of deceit and of trickery which the most devout of their worshipers would find difficult to imitate. Greek historians tell, as one of the most remarkable facts about that new and conquering race which had come out of the mountains and overspread the plains of Mesopotamia, the Persians, that they taught their boys three things: to ride, to shoot, and to speak the truth.

The world, outside of Christendom, has made no apparent moral progress in this regard for the last two thousand years; and among three-fourths of the inhabitants of the earth today a lie is not regarded as a sin, or, at least, is considered a very venial one. In India a man who does not lie when it is to his advantage to do so, is looked upon as a fool. "Truthfulness is the youngest of the virtues." [1]

But among Christian nations there certainly has been improvement in the matter of truthfulness, and it is safe to say that our own race and civilization have come nearer the ideal than any other the world has ever known. There is here definite, measurable progress, which we can discern more plainly than in most branches of applied ethics. For example, this is a commercial age; and, in commerce, lying used to be thought indispensable. In fact, even now, in most countries, small bargaining is not carried on at all without a process of "beating down," involving many lies on both sides. But in this country, at the present time, by far the larger proportion of business transactions is conducted without misrepresentation. It is beginning to be realized that "honesty *is* the best policy." Look over the pages of advertising which make up the bulk of our magazines and you will find they consist, for the most part, of attractive and cleverly depicted descriptions of the articles for sale. Except for such rhetorical flourishes as that the goods in question are "the best in the world," "the cheapest on the market," and "indispensable to every household," which, however far from the truth, are not intended to be accepted literally,

[1] Nietzsche.

and must not be considered too seriously, you will find they contain very few false statements. One can buy from magazine advertisements or mail-order catalogues with the same confidence as though he had the article in hand. Patent medicines and health foods are about the only commodities that keep to the old form of exaggeration and concealment. This remarkable advance in the ethics of advertising is worthy of our attention because there has been perceptible improvement in the matter within the memory of any one of us. We have reason for great encouragement that such a considerable degree of truthfulness and frankness has been attained in a field like commerce once supposed to be necessarily dependent for its success on lying and deception.

We have reason to hope that in time the news and editorial columns of a newspaper will be as truthful as its advertisements, and that finally household and social lying may be eliminated. Even politics is not hopeless. I may be too optimistic on this point, but I am quite positive, in my own mind, that there is less falsifying and misrepresentation of opponents, arguments, and position in political speeches nowadays than there used to be. I believe that any one who will compare the campaign literature of the time of Washington and Jefferson with that of the last presidential campaign, will come to the same conclusion, however little that may say for the truthfulness of either. But this is merely an attempt to see light through the thickest of the clouds of falsehood that envelop us.

It is, at any rate, a great triumph to have a prevalent opinion that truthfulness is a virtue, and to have lying

under an ostensible condemnation. The most degraded among us feel this, and the belief in his own truthfulness is the last shred of self-respect that a man gives up. Approach some man who you think has resigned all pretention to morality, and try it. Tell him that he is a habitual drunkard, and he will grin; accuse him of the grossest licentiousness, and he will blush—with pride; but call him a liar, and you will have to dodge.

What we need, then, is not a higher ideal, nor a sharper realization of the wickedness of lying, but a more sensitive conscience to detect our deviations from the truth. Most of our lying is done unconsciously, which, of course, does not make our case one bit better, but accounts for our obliviousness.

I will not discuss the question as to whether a lie is ever justifiable. It is generally admitted by authorities on ethics that there are occasions when a lie is permissible. Probably none of us would hesitate to mislead a crazed man with a gun chasing a child to shoot it, when asked as to the street down which it had gone. Such cases are so rare as to be of no practical importance in comparison with the number of unnecessary lies we tell. Neither shall I attempt to decide whether we can get along in this world and tell the truth all the time. I believe there have been entire days in my life in which I have not told a lie, and I presume all of you can say as much or more. I do not suppose that any of us would venture to declare that he had spent a week without committing this sin, unless perchance he were living in solitude. We often hear amusing stories of several persons agreeing to tell the truth for some stated period, and of the disastrous consequences

that follow. Very likely the stories are not true, but conventional lies are so interwoven with our civilization that such an ideal as absolute truth, frankly expressed, seems hopelessly unattainable. No one of us can reform the world. Nobody can reform anybody else, anyway. The only thing we can do, practically, is for each one of us to resolve to be a little more truthful than our neighbor, even if we suffer for it, and to devote more thought to the problem of how to tell the truth. Like every other virtue, truth-telling does not result from merely willing to do it. Nobody can be good, or what is more important, do good, by simple effort of the will; no more than he can become an athlete or an engineer by wishing to be one. There is a constant tendency in the church to exaggerate the importance of good intentions, and to ignore results.

It is, doubtless, worse to make a false statement knowing it to be false; but practically there is no difference, except to the individual. So far as the world is concerned, an untruth is as disastrous as a deliberate lie. It makes a difference to yourself, to the relations between yourself and your God, whether you are sincerely mistaken or intentionally deceitful, but to consider that point as the most important is to be purely selfish.

I ask a man when train Number Two leaves, and he says "At four o'clock." When I miss my train I hunt him up and ask him what he meant. He replies calmly: "Oh, I was just mistaken, that's all. I didn't tell a lie. The recording angel did not put down a sin against me that time." Then I know that he is not only careless but selfish. The true Christian thinks more about

other people than himself, and more about consequences than intentions. That is why the true Christian is truthful.

I must repeatedly call your attention to the text, which is positive, not negative. It is not "Thou shalt not lie," but it is "Speak the truth," which is an entirely different thing. We find it much easier to obey a prohibition than a command, and so we try to turn God's laws into that form. We find it easier not to hate than to love; easier to rest on the seventh day than to work on the six days; easier not to lie than to tell the truth. But the negative of a vice is not much of a virtue.

To tell the truth, it is first of all necessary to have a truth to tell. Truth-telling is conveying a fact from one mind to another. Of course, like everything else in this world, it cannot be perfectly done except in the simplest cases. We can never know the absolute truth if it is at all complex. Language is so inadequate that we can never perfectly convey to another even what we thoroughly comprehend ourselves. But these theoretical limits need not concern us, since we do not usually come near them. The more we learn of truth of all kinds, the more easily we can speak it. All education is merely training in truth-telling. That is what our schools are for. That is the sole purpose of a university. If a graduate after four years of hard work can distinguish more clearly between truth and error, the work has been worth while. If he cannot, his university course is a failure, no matter how many degrees he has.

Every scrap of truth is so valuable that we cannot

be too diligent in collecting and preserving it. Hundreds of thousands of dollars are spent in sending astronomers to distant points to watch an eclipse that they may be able to tell the truth a little more nearly about the sun. A cloudy day may make the expedition a failure. Numerous expeditions have been sent to the Arctic and Antarctic regions to find out the truth about the Poles. Many men have sacrificed their lives to find out which species of mosquito carries fever germs. The information on this point in entomology has already saved thousands of lives and will continue to save lives through the years to come. What men are willing to give their lives to discover we ought to be willing to devote a little time to learning. "Wisdom is the principal thing; therefore get wisdom." Habitual ignorance is a vice. Intentional and premeditated ignorance is a crime. It is the unpardonable sin, because it is a sin against the Holy Ghost, the Spirit of Truth.

We cannot know everything, any more than we can do everything. If a botanist spends his whole life studying one plant, he will be able to come nearer telling the truth about it than you or I, but even on this one subject he cannot comply with that glib request we make of our witnesses, to "tell the truth, the whole truth, and nothing but the truth." No man can do that. We have no reason to be ashamed that we are ignorant, but we should be ashamed that we are ignorant of so many things that we could know if it were not that our natural laziness and inborn love of lies prevent us from knowing.

It is, of course, not desirable that we should all know the same things. Nor is it necessary to decide abso-

lutely the vexed question as to what knowledge is of the most worth. Obviously that depends upon circumstances. If a man is going to another city, it is more important for him to know the time tables and the conjunction of the trains than to know about Mars and the conjunction of the planets. It is desirable to know Greek to be able to read the words of Paul and Plato in the original, but if a man were going to live in China it would be worth more to know Chinese. But all truth comes from One who is the only source of truth, and it is all equally sacred.

We should avoid all contempt of those who are pursuing truth in a different form or by different methods from our own, and concern ourselves solely with acquiring what truth we can in our own way.

Our first and principal duty in this world is to seek truth. Never be content with a fiction when you can get a fact. Do not accept anything on poor authority when you can get better. Be as scrupulous as a judge about hearsay evidence. You should use secondhand information as reluctantly as secondhand clothes. Be constantly and perpetually critical of everything you hear and read. "Prove all things; hold fast that which is good." Remember that the "Father of Lies" is always devising stratagems to deceive you; that he is lying in wait in the most innocent-looking ambuscades; that he may make an ally of your best friend and most trusted authority, and deceive the very elect. Never let your desire for information get ahead of your powers of discrimination. Don't swallow faster than you can digest. It is safer to be skeptical than credulous, to miss truth than to believe a lie. In the

words of one of our humorist-philosophers, "It is better not to know so much than to know so many things that are not so," words which might well be carved over the door of every university and public library in the land. To believe a falsehood is to deny God. It makes you a slave of Satan instead of a servant of the Lord. The devil is a liar and the father of lies.

Our most insidious temptations come from our tendency to believe what we want to believe, to see what we want to see, and to shut our eyes to everything unpleasant and disturbing to our preconceptions and desires. It is exceedingly difficult to accept an unwelcome fact at its par value, or to reject a confirmation of our pet theory because it lacks foundation. It requires the keenest of eyesight to follow truth through the maze of error. To realize just how much a fact proves; to perceive exactly where are the limits of our knowledge; to know what we do not know—these are what tax our ability to the utmost and cause us most frequently to fail. If two people in an argument would both tell the truth, would admit the full force of an opposing argument, and care nothing about winning a point, they would find themselves not so far apart as they supposed. But, as Huxley says, "An argument always tends to slip from the question of what is right to who is right."

There are two sides to truth-telling. As it takes two to make a quarrel, so it takes two to tell the truth: one to speak, and one to listen. It is a social act. Robinson Crusoe could not tell the truth—nor a lie—until he had a companion on the island. Now it is difficult

to tell the truth, but it is still more difficult to listen to it. It would be easier for me to tell you what I think of you than to listen while you told me what you think of me.

One of the principal reasons why there is so little truth told in the world is that most of us do not want the truth told. The more nearly a man comes to telling the truth, the more he is disliked and avoided. Anybody who told the naked truth on all occasions would have to take to the hills. People would not endure it. I am not advocating any violent reform in this matter. It would be a useless waste of breath. I would only go as far as you are all willing to go with me in a plea for a little more toleration of truth-telling. Do not be one of those persons of whom we say that they have to be lied to. Remember that your neighbor is, like yourself, under the injunction to speak the truth, and if you by your attitude are preventing him from speaking the truth you are responsible for his sin of omission or commission. Don't compel him to sacrifice either your friendship or his candor. If we would, each one of us, resolve to hear the truth with patience and without offense the greatest obstacle to truth-telling would be removed.

If a lie is told or the truth is withheld, it is more often the hearer's fault. For it is easier to tell the truth, in so far as one knows it, than to invent a plausible falsehood, and men would not take the more difficult course unless they were forced to it. We need another petition in our prayer "Lead us not into temptation." We should add, "Let us not lead others into temptation." To be practical and specific, when you

go shopping do not try to inveigle the clerk into saying that the article is worth two dollars, but that he will cut it down to ninety-nine cents for you on account of your good looks. It might not be true, and you would become *particeps criminis* to the lie. Ask the political speaker why he exaggerates the merits of his cause and candidate and he will tell you it is because his auditors demand such talk. Should he give a fair and unbiased statement of the case as he saw it he would do more harm than good to his cause and party, "damning them with faint praise." Thus the audience is more to blame than the speaker.

It is unfair to lay the blame for "yellow" journalism on the editor alone. The five hundred thousand subscribers are more to blame. When you buy a paper take pains to select the most truthful one you can find, the most sober, sane, unbiased, and reliable. Whenever you do this you are working for the Lord and not the Devil.

A minister said to me not long since that it was impossible for him to preach the truth to his congregation on many theological questions. He could not tell them that the world moved in theology as in everything else, because they who had not studied such questions held a different opinion from him who had spent many years in such study. That does not imply that he told lies to his people, or that he hypocritically concealed his real opinions in order to hold his position. He simply felt obliged to leave them in ignorance of much that had been discovered in recent years about the Bible and the nature of its revelation because they would not bear the truth. They preferred to walk in darkness rather

than in the light. Permit your minister to tell the truth.

You can also give encouragement to truth-telling by being less sensitive in social matters. You need not take offense when an acquaintance does not receive your call for reasons known only to herself, without requiring her to have you told that she is out, or to conceal herself behind the curtains and pretend the electric bell did not work. It is not enough to tell the truth yourself; you should give others a fair chance to tell the truth also.

Each profession has its own peculiar temptations, its own code of ethics. The preacher, who, above all others, should be privileged to speak the truth, is hampered by antique creeds and the fear of offending his people and so losing his power of doing them good. The teacher is tempted to conceal the weak points in his theory and not to present the facts in their crude, natural form, but to fix them up so as to seem simpler than they are and easier to grasp. The lawyer is tempted to exaggerate his case and use unfair arguments to win his cause. The doctor is often known to conceal the truth, sometimes because he fears the effect on the patient, but more often because friends and relatives will not endure the truth and will get a more encouraging physician. Orators soon learn that it is their most exaggerated and untrue statements that win applause, and that when they keep to plain, unadorned facts the audience goes to sleep. Children are trained to lie by some parents, who either punish or scold severely for small offenses, manifesting such holy horror over petty sins that their children fear to confess them. Our conven-

tionalities require constant repression of the child's natural frankness, and this easily leads to concealment and deception.

Women seem to be more deficient in the matter of truth-telling than men, perhaps because their deviations from the truth are more lightly regarded than in the case of men. We have a different standard for the two sexes in almost all forms of morals as in this. For example, it is commonly regarded as worse for a woman to swear or get drunk than for a man. On the other hand, society looks with much more leniency on a woman who tells lies than on a man of like failing. It is the duty of each one of us to work in his own way for the establishment of truth upon earth. All truth, however trivial it may appear, is only a reflection of God who is the truth, just as every pool and every brilliant pebble reflects the image of the sun. As we grow in wisdom we approach nearer to God the Omniscient. Every fact that we acquire, every error we shun, makes us more like him who is our example. That is the whole duty of man, to know God, and we are learning to know God as we know more and more of his doings in the world, of his eternal and unchangeable laws which we call the laws of nature. Not man alone, but every animal, plant, and stone is made in the image of God, and we know of him by studying them. But the brightness of pure truth, of the very face of God, is too dazzling for our weak eyes. We ask that it be veiled for us. And so man weaves a tissue of falsehood, of mystery, of poetry, to hide the brightness of the Truth, making this world still darker by the shadow of his lies. There is nothing mystic about things di-

vine; there is merely our own ignorance. It is he who, even now as when on earth, opens the eyes of the blind, even those who have blinded themselves and who walk in darkness because their deeds are evil. He has promised us that his spirit, the Spirit of Truth, shall come and guide us into all truth.

THE DUTY OF INTELLIGENCE

Wisdom is the principal thing; therefore get wisdom: and with all thy getting get understanding.—Proverbs 4:7.

I PRESUME Christians pay less attention to this than to any other injunction in the Bible. As a class they seem to be no more eager than other people to get wisdom, and you know there is nothing more unpopular than learning. In general people acquire as little knowledge as they can, and while a man will cross the street to avoid a creditor you often find one going around a block to dodge a fact that is coming toward him. Yet it is undoubtedly true that wisdom is the principal thing we need to make the world go better. Most people most of the time are doing as well as they know. There are more blunders than crimes, and the one is just as bad as the other in its consequences. It is ignorance, not malice, that makes the most trouble in government, in society, in the church. We pray often for the removal of our sins, but not so frequently for the removal of our ignorance. We seem to think that if the heart is right all our actions will be right, forgetting that it is the brain that directs the hands and tongue. Now, that we should have good intentions is a very important thing to us, but not so important to other people. A person's good intentions are nothing to us, it is his actions alone that affect us. What matters is not what he meant to do but what he

did. The world is not concerned with motives, but with motions.

So it is no excuse at all for a bad act to say you meant it right. It clears you of blame but it doesn't remove the consequences of your blunder. Your acts are intended to affect others and you are responsible for the results. It is pure selfishness to view your work from the standpoint of your own justifications. You ought to care more about others than yourself and consider the consequences of your actions rather than the motives.

Since so much stress is laid on the importance of good intentions, Christians sometimes get the idea that it is of no importance how their intentions are carried out. That is why some of them do so little good in the world. They are converted, but it doesn't do anybody else any good. They are headed in the right direction, but they don't go. They have been born again, but they remain babies. They have a new heart, but it does not beat.

So it happens that in the practice of Christianity there is a great deal more of zeal than knowledge. Now knowledge without zeal is like a ship without an engine; it is useless. Zeal without knowledge is like a ship without a rudder; it is dangerous. As to which is the worse, God knows. Both bring calamity. Which was it that led to the downfall of the Jewish nation? This is what the Lord said through the mouth of the prophet: "My people are destroyed for lack of knowledge. Because thou hast rejected knowledge, I will also reject thee." [1]

[1] Hosea 4:6.

The Jew never lacked zeal. Paul persecuted the Christians with the greatest zeal. The Pharisees and those that cried "Crucify him" were remarkable for their earnestness and devotion to religion. Torquemada and Philip II of Spain were sincere and well-meaning. The Bolshevists of Russia and the Mohammedans of Asia, who have within the last few years killed more people for their belief than ever perished under the Roman emperors, are zealous men. No, there is no lack of zeal and energy in the world, and good intentions are not rare, "but where shall wisdom be found? and where is the place of understanding? . . . It cannot be gotten for gold, neither shall silver be weighed out for the price thereof. . . . For the price of wisdom is above rubies."

How then can we get wisdom? From the All Wise alone. "For the Lord giveth wisdom," and we are told, "If any of you lack wisdom let him ask of God, . . . and it shall be given him." That, however, does not mean that we have nothing to do but pray for it. We pray for our daily bread, but we have to work for it just the same. It means that from God only can we get wisdom.

God is the personification of wisdom as well as the embodiment of love. That is the literal meaning of the term *Logos* used by John and translated "Word." It includes all the "ologies." All truth comes from God. That is difficult to realize because we come upon truth in strange places and in strange guises in this world, and we often fail to recognize it because it sometimes appears in such unexpected quarters, and in such disreputable forms. But just as all daylight comes from

the sun, whether it is distorted and colored by coming through glass, or dimly reflected from the surface of a muddy pool, so everything that is true has a divine origin. It is important to keep this in mind because there is a tendency to think that only religious truth comes from God. Men have always been trying to limit God, and the latest scheme is to try to confine him between the lids of the Bible. Everything in the Bible came from God, they say; but everything outside, however true it may be, has another source. What other source is not stated; certainly not the "Father of Lies."

There is in the Bible a revelation of God, but only a partial one; it is supplementary to what we can find out about him from studying the world, which, it is taken for granted, we are all studying. All nature is a revelation of God just as much as is the Bible, and a knowledge of it is necessary to a complete comprehension of God. Moral laws are not the whole of God's code. All physical laws are included as well. Any one who discovers a fact, however insignificant, receives it as a gift from the Father of Truth. Science is simply an imperfect attempt to study God as he has revealed himself in nature. The textbook I use in organic chemistry has for its motto the inspiring words of one of the greatest masters of science: "Thinking again the thoughts of God."

If we believe that God is the source of all wisdom, we must reach the conclusion that no two truths can contradict each other. That would seem axiomatic, but a great many people do not believe it. They stow away, in separate compartments of their brains, contradic-

tory statements without any attempt to reconcile them or to decide which are right. They think that a thing may be false at one time and true at another; that a thing may be true in science but false in religion—and *vice versa*. The idea is blasphemous. If we believe in the unity of God we must believe in the unity of truth.

Our duty is to search for truth wherever it is to be found, work for it, gather it up, a grain at a time, as men gather grains of gold from the sands of our mountain streams. We are to search the Scriptures, but also to search every other possible source for light upon the great problems of life. I do not wish to be understood as underestimating the value of studying the Bible, but I wish to emphasize the necessity of studying other things, too. The Bible is not all there is of religion. Enoch, Abraham, and Moses did not have the Scriptures, and they were good men. The early Christians, who were probably as good as we later ones, had only the Old Testament and such echoes of the Master's teachings as still lingered in the minds of the disciples. Not for two hundred years, during which Christianity made its great triumphs, was the Bible put into its present shape.

It is customary at the present day to base moral lessons from the pulpit upon Bible texts alone. In this, however, we are not following the example of the Bible preachers. They took their texts from books or from nature, from both God's revelations—his Word and his Works. From the question put to Job [2] out of the cyclone you will see he is charged with neglect of getting that realization of God's majesty, power, and

[2] Job 38.

love that can only be acquired by the study of natural history. God reproaches Job for not having studied the seasons, the weather, the birds, the leviathan, and the behemoth. Had he done so, he would not have talked so foolishly. If he had known more about natural history he would not have made such blunders in theology. If he had known more about meteorology and zoölogy he would have known more about God.

Solomon recommends the same source of wisdom: "Go to the ant, thou sluggard; consider her ways, and be wise." "The conies are but a feeble folk, yet make they their houses in the rocks."

What texts did Christ preach from? Sometimes he entered into a synagogue, and after the reading of the Scripture took a text from that. But he did not take a text from the sacred writings as often as he did from nature; and he did not preach as often in churches as he did in the woods and among the hills. He took walks through the fields with his disciples on the Sabbath—which shocked the devout people of that day much as it would at the present time—and talked about the wheat, the weeds, the flowers, the birds, and the stones. What would you think if, when you assembled to hear your pastor, he should lead you out from the church, away from pulpit and pews, from organ and Bibles and hymn books, out up the road to the hills, and as you walked he should talk to you of the things you saw, and in a casual sort of way, and draw moral lessons from the flowers, the brush, the bird's nest, and the fossils in the rocks? That is the kind of preacher Jesus was. Doubtless such a minister would strike you as very queer, if not crazy. Just so did Jesus seem

to the church of his time. Very likely a vigorous protest would be made against such an eccentric person—just as the Jews protested. What Jesus disliked especially was conventionality and formalism; but curiously enough that seems to be what the Christian church is particularly attached to and regards as indispensable. It mistakes form for substance, the clothes for the man. The church was founded in the spirit of Christ as a revolt against formalism and conventionality, but I fear there are many belonging to the so-called "evangelical" branches of the church in these days who are as much attached to their simple ceremonies as are the members of other divisions to their more elaborate forms of worship.

One reason why it is so important to know all of God's laws is that the same rule holds good here as in our own courts. Ignorance of the law excuses no one. If a man steps from off the top of a building, ignorance of the law of gravitation does not save him from capital punishment. Ignorance of the laws of physiology and hygiene does not exempt one from disease. It is only by acquainting ourselves as far as possible with the laws according to which God rules the world that we are able to take advantage of them and escape punishment for their violation.

It is the same with God's moral laws as with his physical or physiological laws. "The soul that sinneth, it shall die," is the law, and the only way to escape the penalty is by finding out what are sins and avoiding them. Vice and smallpox are both contagious, and even if you do not know this to be true you will not be able to escape injury if you suffer yourself to become in-

fected. If you fall into a moral abyss the plea that you did not mean to fall, or that you did not know the danger, will not save you from a damaged soul any more than the same excuse will save you from broken bones when you fall into a chasm. Good intention is not enough; good intention plus wisdom is all that will avail. Either alone is practically useless. For real service two things are necessary, a willingness to serve and a knowledge of how to do it. If you wish to save a drowning man you must not only be brave and self-sacrificing, but know how to swim or to throw a rope. That is why Peter says, "Add to your virtue knowledge," and again he enjoins the disciples to "grow in grace and knowledge," because if one gets ahead of the other there is trouble. Paul reprovingly says in Romans: "For I bear them record that they have a zeal of God, but not according to knowledge."

Most of our modern preachers do not lay an equal emphasis on these two agents of human progress, yet such advice would seem to be as much needed now as in the days of Solomon or Paul. It is still common to see zeal run away with discretion:

> There's nothing that's equal, 'mong torture's inventions
> To a good-natured fool with the best of intentions.

There is a fable of an elephant who came across a nest of ostrich eggs lying in the sand of the desert—as Job describes in the passage referred to. The elephant's heart was touched with pity at the sight, and she said to herself: "How sad to see these offspring neglected by the unnatural mother. Or perhaps she

has gone in search of food and has met with an accident. But I, too, am a mother. I will hatch these orphaned eggs." With that she sat upon the nest. We must have something more than a desire to do good, we must know how to do it.

Many a brilliant and devout man has failed in the ministry because he knew but half his business. He knew his Bible, but not his congregation. He had studied theology but not psychology. He had his message, but could not deliver it because he did not know how to address it. A workman must know his material as well as his tools.

All knowledge is useful to the Christian worker. The distinction made between sacred and secular is purely an arbitrary one for practical convenience. The Christian teacher can afford to neglect neither field. It is only in the study of nature that he can get any adequate conception of the greatness of God, his omnipotence and providence. "The undevout astronomer is mad," but all branches of science, properly studied, lead to reverence. No scientist ever makes the mistake so common among unscientific people of doubting the universality and immutability of God's laws. Only those who study natural history realize how God protects and provides for the meanest of living creatures, beings so small that we can hardly see them with our most powerful miscroscopes, but not too small to receive the same care and attention from their creator that we do. They seek their food from God even as do the lions. Every living creature has its pleasures and its duties, its place in the universal system. It takes the conceit out of a man to study biology. There is no

reason to think that in God's biological system a man is better cared for than a microbe.

Of quite as much importance as the study of science is the study of history. Thus alone can we learn how God deals with men in masses. We find that a nation, like an individual, prospers in so far as it keeps God's laws; that "righteousness exalteth a nation," that all the great empires that have prevailed on the earth have risen by their virtues, and fallen through their vices, that politics and ethics cannot be separated with safety.

There is a saying that "history is philosophy teaching by example," and it is certainly one of the best ways to learn these lessons. Most of the Bible is pure history; selected passages in the life of a single race, chosen with a view to their moral teachings. But the Jewish is not unique in being suited for this purpose; we should study the history of other nations in the same way.

We should know also how God deals with the individual, not confining our attention to those whose biographies are given in the Bible, but studying any life of which we have the necessary information, historical characters as well as our friends and neighbors. We need to know how men think and feel, what they do and why. Such knowledge will make us more charitable and sensible. We shall then know what it means to "put yourself in another's place" and learn the true meaning of the Golden Rule.

We need to use greater wisdom in the study of the Bible. There is no subject in the world so poorly taught. We require an examination and a certificate before we allow a person to teach our children arithme-

tic and spelling, but we give anybody that is willing to take a class in Sunday school the far more difficult and important task of teaching religious truth. The Bible is not an easy book to understand. It requires long continued and intense study before we can get at the real meaning of those who wrote so long ago and under such different circumstances, and in foreign tongues. It is quite easy to find somebody to "teach a class in Sunday school" if you are not too particular as to what is taught or how it is taught; but it is hard to find any one sufficiently well qualified so as to be sure that truth and not error is being taught.

We are, most of us, willing to talk but not willing enough to think and learn. Yet the latter is the more necessary. It is a poor teacher who does not spend more time in the preparation of a lesson than in teaching it. In the church the common custom is for the minister to spend six days in studying and one day in teaching. This period for preparation is none too long. I have known preachers to whom I would have been willing to extend this time to three or four weeks or even longer.

Let each one of us apply his heart unto wisdom, and in this way hasten the time to come, when "the earth shall be filled with the knowledge of the glory of the Lord, as the waters cover the sea."

THE GEOMETRY OF ETHICS

Strait is the gate, and narrow is the way, which leadeth unto life, and few there be that find it.—Matthew 7:14.

You may, if your arithmetic is erratic, add up a column of figures a dozen times and get different sums. Only one is correct. It is necessarily the same about the more complicated problems of life, only we cannot see it so clearly. Elementary mathematics is the only science man has mastered so he can put real confidence in the results of his ratiocination.

Science, which aims at certainty, approaches it by the method of trial and error, thousands of trials, thousands of errors, before an approximation to the truth is attained. Truth is one; falsehoods are infinite.

Nine-tenths of the ideas that come into our heads are wrong. The object of education is to select the one that is right.

Nine-tenths of the impulses that beset us are wrong. The task of civilization is to suppress the nine.

No matter how complex the problem, there is never more than one right answer, one right way out, one strait and narrow path, hard to find and hard to follow, one road leading out of the maze of many false turns; all the others are blind alleys or paths that return upon themselves.

It is an axiom of plane geometry that there can be only one straight line connecting two points. From the point where we are to the point where we wish to go,

there is only one short straight road; all the other possible paths are more or less divergent and devious.

The rules of conduct are as invariable and absolute as the rules of geometry. The only difference is that we cannot see so clearly in ethics as in mathematics. The falling of a fog makes our road obscure, but does not alter its length or direction.

There is only one best move in a game of chess, whether we know what it is or not. There is only one wisest action in any emergency, whether we know what it is or not.

There are no indifferent actions, no equivalent choices. It may seem a matter of indifference which street you turn down in your morning stroll, but that is because you do not know what fate awaits you around the corner. If you turn down First Street you may be run over by an automobile. If you turn down Second Street you may meet a man who will make your fortune. If you turn down Third Street you may catch a fatal microbe. If you turn down Fourth Street you may see the girl you want to marry.

If you knew, you could choose. But all the streets look equally inviting, and not knowing which is the best, you leave it to "chance." You toss up a penny, but it is not a matter of chance which face of the penny falls uppermost, for that is determined by the inevitable interaction of the forces of gravitation and rotary momentum.

Even if you could know what lay before you on each of the optional avenues, you would not necessarily be able to select the best. It may be that Second or Fourth Street would lead you to more unhappiness

than First or Third. Not knowing which is the most fortunate road, you would be grateful if on that morning you should find all the others blocked by signs of "Street closed. Detour." You would be glad to be forced into good fortune if you could not find your own way. Nobody wants freedom of choice except in those cases where choice would lead him toward his goal, whatever that may be.

Nobody has the right to do wrong. Nobody but a congenital idiot would claim such a right and nobody but an incorrigible criminal would want to exercise it. Every sane man wants to do what is for his best interests and every good man wants to do what is for the best interests of others as well.

There can be no two opinions about this. The only thing we disagree about is what is for the best interests of ourselves and society. This is due solely to our ignorance, for if we all knew always what was best to do, we should of course all want to do it. But, because we don't and can't always know, we have to allow considerable latitude as to thought and action, the more latitude in those fields where there is the more uncertainty. There is obviously but one course that ought to be pursued or would be pursued if we could know in advance the outcome of all our options.

RELIGION AND RELATIVITY[1]

Beloved, be not ignorant of this one thing, that one day is with the Lord as a thousand years, and a thousand years as one day.—II Peter 3:8.

I READ recently in the papers that one of the bishops had warned the schools of his denomination to beware of Einstein as well as Darwin.

I was glad to see that. I did not know that the bishops had heard of Einstein, although I knew that they were beginning to take Darwin seriously, sixty-five years after the appearance of *The Origin of Species*. Ignorant opposition is a better sign than ignorant indifference. I was afraid that our ecclesiastical authorities would not get around to Einstein till 1970, when scientists would be busy about something else.

Another encouraging thing about it is that the good

[1] Preachers will probably say of this that it is not a sermon and that a congregation would not listen to such a discussion of physical and metaphysical questions. The first criticism I would not venture to dispute, since they know better than I what constitutes a sermon. But on the second point I know they are wrong, for it has been tried out in various church forums and the people have not only heard it through patiently but lingered as long after to ask questions. I don't say that this would be profitable preaching fifty-two times a year, but I do think that many preachers fail to realize the interest taken in such topics. I may add that all the "sermons" in this volume have been put to this test. They have been gradually hammered into shape on the heads of congregations of divers denominations, and all I have done in preparing them for the press is to add quotations where needed to substantiate points and to append references to sources and further reading.

bishop perceives that such a revolutionary conception in the domain of psysics as the theory of relativity could not leave altogether unaffected our philosophy of the universe, and hence our ethics and our religion. In this he is wiser than some of our leading scientists who say that relativity is a purely mathematical conception with which the common man has no concern, for it is of no practical importance and so cannot affect his views or conduct. Well, so was the Copernican theory. It really does not make any difference to us whether we regard the sun as a satellite of the earth or not, yet it did make quite a commotion in the theological world at the time, and the change of man's point of view of the universe has profoundly influenced the current of human affairs ever since.

Pope Paul V was quite right in thinking that it concerned the Church. The Inquisitors were quite within their rights, although they may have been wrong, in expressing their opinion that to believe "that the sun is the center and does not revolve about the earth, is foolish, absurd, false in theology, and heretical, because expressly contrary to Holy Scriptures." But Cardinal Bellarmin was quite wrong in commanding Galileo "in the name of his Holiness, the pope, and the whole Congregation of the Holy Office, to relinquish altogether the opinion that the sun is the center of the world and immovable, and that the earth moves, or henceforth to hold, teach, or defend it in any way whatsoever verbally or in writing."

The lesson that modern churchmen should learn from the Galileo case is not that they should ignore scientific speculation, not that they should be afraid to express

their opinion as to its bearing on theology and ethics, but rather that they should seriously study such questions and not assume too hastily that the acceptance of the new notion would be fatal to the faith. For if in spite of their protest the theory finds acceptance and the faith still survives, they are left in the embarrassing position of the doctor who daily meets on the street the man whom he told ten years ago that he had only six months to live, and who invariably greets him with the cordial inquiry: "How is *your* health, doctor?" Religion has survived so many "death blows" in the course of the last ten thousand years that we may assume that it will not come to a violent end in our time. It is in more danger of succumbing to sleeping sickness.

As we can now look back upon the battlefield of 1616 from the height which science has since won, and can see both sides of it, we are struck with the futile folly of the whole affair. A modern astronomer would agree with the Pope that the sun is not immovable; in fact, he measures its motion, relative to the fixed stars, which he now knows are not "fixed" either. The modern mathematician, regarding all motion as relative, will admit that the choice between the two hypotheses is essentially a matter of convenience. By assuming that the sun is stationary and that the earth revolves around it, and rotates on its own axis, astronomical calculations become simplified; and other phenomena, such as the flattening of the poles and the shifting of the Foucaultian pendulum, fit into the same theory, whereas on the theory of a fixed earth we should have to assume extra and inconvenient hypotheses to explain them. But the astronomer, like the rest of us, uses the Ptole-

maic theory in preference to the Copernican on all ordinary occasions. In his most serious treatises he will say, "The sun rises" at such a time, just as he says, "The moon rises," and if you point out the contradiction, he does not seem a bit ashamed of his lapse to the old and exploded theory. He uses the heliocentric theory in explaining the structure of the solar system because it is more convenient. He uses the geocentric the rest of the time for the same reason.[2]

The adoption of the relativist point of view does not relieve the odium that rests upon the Inquisitors who forced Galileo to recant. On the contrary, it makes it worse for them and better for Galileo. For if it is mere matter of convenience whether we assume the earth or the sun to be the stationary body, they had no right to punish those who chose the alternative hypothesis, or to prohibit their advocating it. On the other hand, while we should all respect Galileo more if he had stuck to his right of free thought and free speech and suffered

[2] "The two propositions, 'The earth turns' and 'it is more convenient to suppose the earth turns round,' have the same meaning; there is nothing more in the one than in the other." (Poincaré: *Science and Hypothesis,* p. 85.)

Freundlich, Director of the Einstein Tower at Potsdam, says that rotations, like linear motions, are to be regarded as relative, so, "whether we assume that the earth is at rest and the bodies circle round the earth, or that the bodies are at rest and the earth is rotating on its axis, is fundamentally unessential in describing the whole event." Therefore it is "just as admissible to interpret the observed facts" in one way as the other. (See Freundlich, *The Theory of Relativity,* pp. 18, 90; *The Foundations of Einstein's Theory of Gravitation,* pp. 91-94.)

Cyrano de Bergerac, who was by no means such a fool as Rostand makes him out to be, said, "When I pirouette it is the same as if I stood still and the world turned round."

martyrdom for it, we can see more excuse for him if he actually took the scientific view of the question and regarded the heliocentric theory as an ingenious and useful speculation, which indeed was the way he presented it in the very "Dialogo" that got him into trouble. A scientist really does not care much whether you call his theory an "established fact" or a "working hypothesis," so long as you let him use it in his business. The biologists are so busy nowadays originating new species of plants and animals that it is hard to get them to take as much interest as they ought to in what happens to *The Origin of Species*.

The scientific man, especially the scientific investigator, holds his theories with a light hand, but keeps a firm grip on his facts. This is just the opposite of the lay attitude toward science. If the layman is interested in knowing the speed of light it is only because he thinks that he learns from it that all space is filled with a rigid elastic solid, at which he cannot but wonder. The scientist is interested in the ether only because it helps him in his calculation of the speed of light.

A lecturer on wireless telephony will use in the course of the hour two or three more or less contradictory conceptions of electricity, the older one-fluid theory, the later two-fluid theory, and the modern electron theory. If afterward you ask him which is right and which is wrong, you will not get a very satisfactory answer. He does not know and obviously does not care. You insist upon his telling you which theory he personally believes in. He really had not thought of "believing" in any of them. If he uses white chalk on the blackboard in preference to red it is not because he

denies the existence of red chalk and its occasional usefulness. The botanist alludes to a certain flower as a "poppy" and again as "Eschscholtzia." He means the same thing but is using different languages; in the first case English, in the second case I don't know what.

At present physicists are in the amusing situation of having to use two irreconcilable, or at least irreconciled, theories of light. The ether-wave theory is needed to explain interference. The corpuscular theory is needed to explain the spectrum. So as Sir William Bragg puts it: [3] "On Mondays, Wednesdays, and Fridays we use the wave theory; on Tuesdays, Thursdays, and Saturdays we think in streams of flying energy, quanta, or corpuscles."

Such inconsistencies, or antinomies, due to irreconcilable, or at least irreconciled, facts or theories, occur in science as they do in philosophy, theology and daily life. The apparent contradiction may persist for years, centuries, perhaps forever. Some of the best known and most persistent of such antinomies are those between mind versus matter, free-will versus determinism, atomicity versus continuity, the one versus the many, the omnipotence of God versus the existence of evil, absolute altruism versus essential selfishness, and nationalism versus internationalism. Metaphysicians have been disputing over some of them for 2500 years without either side being able to deliver a knockout blow to the opposite party, but scientists do not bother much about discordant theories, having found that they do not seriously interfere with investigation. On the contrary they often stimulate research in the

[3] *Discovery*, Sept., 1921.

effort to eliminate the discrepancy. None of us can be completely consistent either in philosophy or conduct of life.

Professor E. W. Stewart of the University of Iowa in discussing "The Value of Inconsistency" in the *Scientific Monthly* of February, 1925, with Emerson's observation, "A foolish consistency is the hobgoblin of little minds," as a text, points out many cases in the history of science where inconsistency has led to important discoveries while consistency has often retarded progress. He concludes:

It is distressing to witness the somewhat insistent belief of young people that religious faith and scientific knowledge must be in agreement. . . . That there is no contradiction found in science to the most fundamental concepts of the theologian is far more important than the disagreements in minor details. While every one should wish for no conflict between science and theology, consistency is not an immediate goal and inconsistency must be anticipated as a normal accompaniment of progress in such widely separated fields. He who spends his time attempting to reconcile the teachings of science and of theology surely cannot have a very important function in contributing to the progress of either. Scientific theories are to be *lived* and not merely *believed*. He who is engaged in the encouragement of the application of theory in either field is aiding in the progress of the world. By his devotion to a cause and his willingness to be inconsistent without worry, he can make a definite contribution. . . . Emerson was right; past opinions should not cause excessive mental inertia. But the above conclusions take us much farther. Inconsistency in opinions held at *one* moment may be necessary for progress and the individual should accept this view and cease

to regard complete consistency as always either desirable or valuable.

It is eminently desirable that people should have faith in science, but in order to have that they must have the same sort of faith in it that the scientist has. Otherwise they will regard it as a lot of ingenious fancies which are proved false by each succeeding generation. Science is molting just now and looks queer. The public ought to understand clearly that the process means growth and not disease.

Revolutions in science never go backwards and they differ from political revolutions in that nothing worth saving is lost in transition. The new theory must always include all that the old one does and more. In their struggle for existence, formulas fight like snakes; the one that can swallow the other beats.

I have gone back to Galileo for two reasons; first, because it is a good example of how not to treat a new scientific idea; and, second, because the Einstein theory is a continuation of the same development of thought, is meeting with the same sort of blind resistance and is liable to lead to popular misconceptions, as did the Copernican and Darwinian theories. It is already apparent that the occultists are planning to use the fourth dimension as an attic to put spooks in.

Professor Eddington of Cambridge, the leading British authority on relativity, discussed all three of these points in his Romanes Lecture at Oxford in 1922 [4] from which I quote the concluding paragraphs:

[4] "The Theory of Relativity and Its Influence on Scientific Thought," printed in the *Scientific Monthly*.

The present revolution of scientific thought follows in natural sequence on the great revolutions at earlier epochs in the history of science. Einstein's special theory of relativity, which explains the indeterminateness of the frame of space and time, crowns the work of Copernicus who first led us to give up our insistence on a geocentric outlook on nature; Einstein's general theory of relativity, which reveals the curvature or non-Euclidean geometry of space and time, carries forward the rudimentary thought of those earlier astronomers who first contemplated the possibility that their existence lay on something which was not flat. These earlier revolutions are still a source of perplexity in childhood, which we soon outgrow; and a time will come when Einstein's amazing revelations have likewise sunk into the commonplaces of educated thought.

To free our thought from the fetters of space and time is an aspiration of the poet and the mystic, viewed somewhat coldly by the scientist who has too good reason to fear the confusion of loose ideas likely to ensue. If others have had a suspicion of the end to be desired, it has been left to Einstein to show the way to rid ourselves of these "terrestrial adhesions to thought." And in removing our fetters he leaves us, not (as might have been feared) vague generalities for the ecstatic contemplation of the mystic, but a precise scheme of world-structure to engage the mathematical physicist.

My purpose here is merely to show that there is relativity between the theory of relativity and religion. I shall not attempt to explain what the theory is,[5] still less what it means to religious thought. This is a task

[5] I have attempted to put into popular language some of the relatively simple aspects of relativity in *Easy Lessons in Einstein,* and I have gone further in my *Chats on Science,* by putting the theory into words of one syllable.

that will take a hundred years of hard thinking at the least. If the theologians do not want to bother about it until the question "has been settled by science" that is their privilege, only they must not complain if sometime in the twenty-first century they wake up to the fact that it has not been settled to their satisfacion, and that it is too firmly settled in the popular mind to be upset. Meantime they will be getting more and more out of touch with the trend of thought and will be missing a lot of fun.

It should be observed that there are three different theories of relativity and innumerable versions and ramifications of them. There is, first, the metaphysical theory of relativity, the idea that all our measurements of space, time, and motion are merely relative, which dates back to Aristotle, Plato, and Plotinus. There is, second, the special theory of relativity enunciated by Einstein in 1905 to explain the conflict of experiments on ether drift. And third, the generalized theory of 1915, in which Einstein extended the conception of relativity to include gravitation, which he ascribed to the structure of time and space, rather than the hypothetical attractive force invoked by Newton. The Einstein theories differ from the ancient theory in being definite mathematical systems capable of being verified or refuted at some points by certain very delicate astronomical and physical measurements. So far the experimental evidence of the last ten years is on the whole in favor of Einstein,[6] although it is regarded as

[6] There is at present only one piece of experimental evidence against Einstein, the report in 1925 by Prof. D. C. Miller that his repetition of the Michelson-Morley experiment on Mt. Wilson showed a partial drift of the ether.

inconclusive by many scientists. It is yet too early to say whether Einstein's mathematical schemes will be incorporated intact into our science or in what ways they will be restricted, expanded, or modified. But it is already evident that the theory of relativity, together with Planck's quantum theory and Bohr's atomic theory, which are contemporary and closely connected with it, have definitely and permanently altered our ideas of the universe. Whatever may be their future fate, they have already proved their value in correlating unconnected facts and in guiding research into new fields.

That they will have an effect upon religious thought is also apparent, not only from the alarm of the bishop to whom I referred in the beginning, but even more significantly by the efforts now made to assimilate the new ideas to the old doctrines.

That relativity is not necessarily incompatible with the old theology is shown by the fact that the honor of being a forerunner of Einstein is claimed for both St. Thomas Aquinas [7] and Jonathan Edwards.[8]

Let us consider one instance of the possible bearing of the new ideas upon religious thought. One of the popular delusions that religion has always had to fight, as has science also, is our common crude conception of matter as something essentially solid, unalterably heavy, impenetrable, continuous, unmoving, inert, indestructible. Democritus and Lucretius struck a blow at this idea when they advanced the notion that all material bodies were composed of invisible atoms inces-

[7] In the London *Nation,* Dec. 27, 1919.
[8] In *Science,* Oct. 29, 1920.

santly in motion, but it took some two thousand years for their view to gain general acceptance, if indeed it has yet penetrated the common mind. A hundred years ago Dalton took it up and it became the basis of modern physics and chemistry, but the atoms were still looked upon as little round hard things, incapable of decomposition.

But according to present conceptions an atom consists of an inconceivably minute nucleus, charged with positive eletricity, around which revolve from one (in hydrogen) to ninety-two (in uranium) satellites of negative electricity at speeds ranging from 1,300 to 124,000 miles per second. That is, the actual amount of matter, if you can still regard it as material, in an apparently solid body occupies only about a million-millionth part of its bulk, and if we could put a big man into a press and squeeze all the vacant space out of him he would shrink to a pinhead size.[9]

We may go further and say that this amount of matter, little as it is, does not remain constant either in mass or in substance. For according to Einstein it increases in mass the faster it travels up to the speed of light, and faster it cannot go. This leaves only one of Newton's three laws of motion intact, the action-equals-reaction one.[10] Matter itself is now regarded as a form of energy, or as transformable into energy.

It is supposed that all the other chemical elements are built up out of hydrogen atoms as a wall is built of bricks. The first step of this process would be to build a helium atom out of four atoms of hydrogen. But this

[9] *Atoms and Rays*, by Sir Oliver Lodge, p. 14.
[10] Lodge, p. 195.

involves the annihilation of matter and the creation of energy. If, for instance, it were possible to transform 10,077 pounds of hydrogen into helium, only 10,000 pounds of helium would be produced. The remaining seventy-seven pounds—no, that is wrong, for it would not remain—I should say rather, the other seventy-seven pounds, would vanish from the material world and in its place an enormous amount of energy would be produced, passing off presumably as radiant light and heat. This transformation has not yet been accomplished in the laboratory but several young scientists are experimenting along this line and they may sometime succeed. It would be very handy to be able to make helium for our dirigibles at will and get enough power to run them thrown in free. It is believed that the light that we get from the sun and stars comes largely from such decomposition of matter into energy. Four million tons of the sun's mass is estimated to be evaporating off every second in the form of light.

This is such a decided change of view from the conceptions held in the last century, and still holding in the minds of most men, that it has been referred to as "the dematerialization of matter." [11]

Charles Nordmann, astronomer to the Paris Observatory, concludes: [12]

[11] Rougier, *Philosophy and the New Physics,* p. 62. Dr. J. H. Jeans in his new theory of the source of light in the sun and stars suggests that the negative electrons and the positive nucleus of the atoms may fall together and by so neutralizing their charges annihilate one another and pass away "in a blaze of glory." He says: "Nothing in the suggestion appears to conflict with modern atomic physics." (*Nature,* Dec. 6, 1924; Jan. 24, 1925.)

[12] *Einstein and the Universe,* p. 115.

From all this it follows, by calculation and by the simple and elegant reasoning of Einstein, of which I here convey only the faintest adumbration, that mass and energy are the same thing, or are at least the two different sides of one and the same coin. There is, then, no longer a material mass. There is nothing but energy in the external universe. A strange—in a sense, an almost spiritual—turn for modern physics to take.

Physicists whose profession is the study of matter do not take matter so materialistically as do other people. Poincaré says:

Masses are coefficients it is convenient to introduce into calculations. We could reconstruct all mechanics by attributing different values to all the masses. This new mechanics would not be in contradiction either with experience or with the general principles of dynamics. Only the equations of this new mechanics would be less simple.[13]

But do not fall into the error of supposing that "science has proved that matter does not exist." To explain a thing is not to explode it. If the concept of matter is, as all our concepts must be, a fabrication of the mind, this does not imply that we can get along without it. Although the physicist reduces matter to a small italic *m*, stone is still heavy, and steel is still sharp. And a stone will bruise and a steel will pierce just as much as if we had not found out its formula. We do not change nature when we change our minds.

Yet it does make a difference, after all, how we look upon the external world. The more we know about

[13] Poincaré, *Science and Hypothesis*, p. 76.

matter, the better we can manage it. And when we realize that the laws of nature are made in our own minds they cannot hold our minds in bondage. The crass materialism of former centuries should be impossible in the future.

As it is important to understand just what the relativist means when he speaks of the part the mind takes in the formulation of the laws of nature and in the selection of fundamental concepts, I will quote from one of the best authorities on the question, Professor Eddington of Cambridge: [14]

Mind filters out matter from the meaningless jumble of qualities, as the prism filters out the colors of the rainbow from the chaotic pulsations of white light. Mind exalts the permanent and ignores the transitory; and it appears from the mathematical study of relations that the only way in which mind can achieve her object is by picking out one particular quality as the permanent substance of the perceptual world, partitioning a perceptual time and space for it to be permanent in, and, as a necessary consequence of this Hobson's choice, the laws of gravitation and mechanics and geometry have to be obeyed. Is it too much to say that mind's search for permanence has created the world of physics? . . . The conclusion is that the whole of those laws of nature which have been woven into a unified scheme—mechanics, gravitation, electro-dynamics and optics—have their origin, not in any special mechanism of nature, but in the workings of the mind.

[14] In his *Space, Time and Gravitation,* probably the best book to give the general reader some idea of the new theories and their significance. A later book, Bertrand Russell's *The ABC of the Atom,* is also commendable for this purpose.

The theologians do not seem to know a friend when they see him. They have always insisted that the material universe is finite in space and time, but they view with suspicion the relativists, who not only believe it but undertake to prove it and to measure its dimensions.[15]

According to the theory of relativity, the space-and-time framework in which all things happen may be regarded as rolled into a sort of four-dimensional sphere, so that the universe is limited although unbounded; it has no end and yet is not immeasurably great. We know that it is so with the surface of our earth. One might travel forever in any direction without reaching the end of the earth, yet he could never get more than twelve thousand miles from home, for if he went farther he would be nearing his starting point. So too a ray of light starting out from anywhere in any direction would on account of the curvature of space return in the course of time to its origin, and this time is estimated at a thousand million years. From this corollary of the relativity theory, Professor Eddington deduces some curious consequences:

A ray of light from the sun would thus take about 1,000 million years to go round the world; and after the journey the rays would converge again at the starting point, and then diverge for the next circuit. The convergent would have all the characteristics of a real sun so far as light and heat are concerned, only there would be no substantial body

[15] "The finite character of the universe appears capable of experimental demonstration." Gumbel, *Science Abstracts*, 25, No. 257.

present. Thus corresponding to the sun we might see a series of ghosts occupying the positions where the sun was 1,000, 2,000, 3,000, etc., million years ago, if (as seems probable) the sun has been luminous for so long.

It is rather a pleasing speculation that records of the previous states of the sidereal universe may be automatically reforming themselves on the original sites. Perhaps one or more of the many spiral nebulæ are really phantoms of our own stellar system. Or it may be that only a proportion of the stars are substantial bodies; the remainder are optical ghosts revisiting their old haunts.[16]

This means that if the world is round—I mean the whole universe, not our own minor planet—a ray of light would roll round and round in it like a ball inside a roulette wheel, or rather, since that simile will be incomprehensible to you, like the marble of pigs-in-clover. Although the light from the sun disperses in every direction all the rays come together again at this antipodal focus, only to scatter and meet at their original rendezvous. Except of course such of them as get lost on the way by running up against planets or being absorbed by drifting dust or pulled out of the straight track by gravitation, as Einstein discovered. Stars may have their doubles at opposite points.

It is an interesting idea, anyhow, and probably some preacher, some real preacher, will pick it up and make a sermon out of it. For the sun is not the only thing that is dogged by the images of its past selves. We shine too, although only by reflected light. It must be,

[16] *Space, Time and Gravitation*, p. 161.

then, that our radiations are traveling about somewhere in the world and will be reproducing our looks and acts on the cinema screen of the farthest horizon of space and time a thousand million years after we are dead. If we are going to have that sort of immortality imposed upon us, we would prefer to pick our poses. The moral of it is—although probably the preacher would draw a different one—that if we are going to do anything we are ashamed of we should go inside the house and pull down the blinds or wait till it is dark. But this lesson is needless, for such precautions are customary. Even then one can't feel quite safe in sinning. There are the X-rays, you know—and nobody knows what other invisible pencils may be registering all our actions or even thoughts—or, what's worse, the desires that we don't dare think. They, too, must leave their mark somewhere.

The implications of the relativity theory in regard to time are quite as startling as those in regard to space. Time and space are indeed so inseparably connected that we cannot even conceive of them independently. Einstein "assumes that there is a fundamental relation between time and space, such that, to put it simply, no one can tell what time it is until he knows *where* he is, and he cannot tell where he is until he knows *when* he is." [17]

The theory suggests the possibility, though it does not imply the actuality, of a reversal of time, or the overlapping of past and future, "so that, in principle, it is possible to experience events now that will in part be an

[17] I borrow this concise expression from Prof. A. G. Webster, *The Review*, Jan. 31, 1920.

effect of my future resolves and actions." [18] One of the deepest thinkers of our day, Prof. Alfred North Whitehead of Harvard University, in the following passage from his book on *The Concept of Nature* shows how widely the trend of twentieth-century thought differs from the mechanistic and materialistic conceptions prevailing in the last century:

> The materialistic theory has all the completeness of the thought of the middle ages, which had a complete answer to everything, be it in heaven or hell or in nature. There is a trimness about it, with its instantaneous present, its vanished past, its non-existent future, and its inert matter. This trimness is very medieval and ill accords with brute facts.
>
> The theory which I am urging admits a greater ultimate mystery and a deeper ignorance. The past and future meet and mingle in an ill-defined present. The passage of nature, which is only another name for the creative force of existence, has no narrow ledge of definite instantaneous present within which to operate. Its operative presence which is now urging nature forward must be sought for throughout the whole, in the remote past as well as the narrowest breadth of any present duration. Perhaps also in the unrealized future. Perhaps also in the future which might be as well as the actual future which will be.

The possibility of a new conception of the relations of past and future was discussed at the Aristotelian So-

[18] From *Space, Time, Matter,* by Hermann Weyl. I have discussed this point in the chapter "Tangling Up the Time-Line" of *Chats on Science.* Esclangon goes so far as to propose an experiment to prove the inversion of time as a reality. *Comptes Rendus* 173: 1340 (1921).

ciety by Dean Inge of St. Paul's, one of the few clergymen of our time who are interested in metaphysical questions. I quote from the London *Times* report:

> We happen to be moving away from 1900 and towards 1930, just as the earth happens to revolve in one direction and not in the other. But can 1900 and 1930 not both be equally real, each holding its fixed position in an unchangeable series?
>
> Were that so, the direction of the stream of time would have a meaning only for us, and might have the opposite meaning for other consciousnesses, and no meaning for an absolute consciousness. The interest of the speculation extends from time to cause and effect. A common conception of causation involves the idea of a transaction between two things of which the one is active, the other passive. But this interpretation of cause is being replaced in science by the idea that "cause" and "effect" indicate nothing more than different positions in the time sequence. When we speak of the past determining the future, we may also speak of the future justifying, explaining, or even determining the past. Past and future, cause and effect, may indeed be mere aspects of a timeless reality.

This reminds us that St. Thomas Aquinas taught that God sees past, present, and future at once as an eternal present. It also reminds us of the verse:

> Time flies.
> But no,
> Time stays,
> We go.[19]

[19] A free translation from Ronsard.

Let me give you one other hint of the strange speculative possibilities suggested by the new physics, although it is a blow to man's conceit in assuming that the universe is made after the manner of his own mind, that he can ever reason it out. I quote the concluding passage of Bertrand Russell's *The ABC of the Atom:*

> The theory of relativity has shown that most of traditional dynamics, which was supposed to contain scientific laws, really consisted of conventions as to measurement, and was strictly analogous to the "great law" that there are always three feet to a yard. In particular, this applies to the conservation of energy. This makes it plausible to suppose that every apparent law of nature which strikes us as reasonable is not really a law of nature, but a concealed convention, plastered on to nature by our love of what we, in our arrogance, choose to consider rational. Eddington hints that a real law of nature is likely to stand out by the fact that it appears to us irrational, since in that case it is less likely that we have invented it to satisfy our intellectual taste. And from this point of view he inclines to the belief that the quantum-principle is the first real law of nature that has been discovered in physics.
>
> This raises a somewhat important question: Is the world "rational," i.e., such as to conform to our intellectual habits? Or is it "irrational," i.e., not such as we should have made it if we had been in the position of the Creator?

Since little thought has as yet been given to the influence of the doctrine of relativity upon social and ethical questions, I will conclude with a quotation from Viscount Haldane, who has given special attention to that point in his work on *The Reign of Relativity*:

Assuming the principle of relativity to mean all that has been said, what guidance does it offer for the conduct of our individual lives? I do not think that the question is a difficult one to answer. The real lesson which the principle of the relativity of knowledge teaches us is always to remember that there are different orders in which both our knowledge and the reality it seeks have differing forms. These orders we must be careful to distinguish and not to confuse. We must keep ourselves aware that truth in terms of one order may not necessarily be a sufficient guide in the search for truth in another one. We have, in other words, to be critical of our categories. As an aid to our practice, the principle points us in a direction where we may possess our souls with tranquillity and courage. We stand warned against "other-worldliness" in a multitude of concealed forms. We are protected, too, if the doctrine be well-founded, against certain specters which obtrude themselves in the pilgrim's path. Materialism, scepticism, and obscurantism alike vanish. The real is there, but it is akin in its nature to our own minds, and it is not terrifying. Death loses much of its sting and the grave, of its victory. For we have not only the freedom that is of the essence of mind, but we are encouraged to abstract and withdraw ourselves from the apparent overwhelmingness of pain and even of death itself. Such things cease to be of the old importance when they lose the appearance of final reality.

There may come to us, too, contentment of spirit, and a peace which passes our everyday understanding. We grow in tolerance, for we see that it is in expression rather than in intention that our fellow-men are narrow. We realize that we are all of us more, even in moments of deep depression, than we appear to ourselves to be, and that humanity extends beyond the limits that are assigned even by itself to itself.

It is a creed that if it be true helps those who can make it their own to dispel obscurities, and to lighten for themselves and for others the burden and the apparent mystery of human life. It is a creed that stimulates the practice of unselfishness in social and religious life, interpreted as fully harmonizing with the dictates of philosophical thought. "If any man shall do His will, he shall know of the doctrine!"

THE ETHICS OF EVOLUTION

I say unto you, that God is able of these stones to raise up children unto Abraham.

And now also the axe is laid unto the root of the trees; therefore every tree which bringeth not forth good fruit is hewn down, and cast into the fire.

I indeed baptize you with water unto repentance: but he that cometh after me is mightier than I, whose shoes I am not worthy to bear: he shall baptize you with the Holy Ghost, and with fire:

Whose fan is in his hand, and he will thoroughly purge his floor, and gather his wheat into the garner; but he will burn up the chaff with unquenchable fire.—Matthew 3:9-12.

In visiting one of the states where efforts were being made to pass a law prohibiting the teaching of evolution I was told of a lobbyist who approached a member of the legislature with the remark that he had been informed on the best authority that there was an evolutionist in the state university.

"Great heavens!" replied the horrified legislator, "You don't mean to say that he practices it, do you?"

In this the legislator showed that practical common sense which is fortunately so often characteristic of our politicians. He was of course wrong in assuming so hastily that the practice of the principles of evolution would necessarily be wrong. But he got straight at the root of the matter when he saw at first glance that the important question was their application to the conduct of life.

Not all our theologians have shown the same perspicacity. They have been so absorbed in the specula-

tive and historical aspects of the question that they have ignored its vital relation to present-day problems within their own field. They have dipped into geology and embryology, where at the best their efforts could not contribute much to the clarification of the question, and have neglected to study the ethics of it, where their expert aid was much needed. They have been much concerned with the question whether the account of creation given in the first chapters of Genesis was in irreconcilable conflict with the account given in the latest textbook on geology or whether the two could be made to harmonize, with a bit of budging on both sides.

But whether they agree or not, and whether we believe them both or neither, they both deal with a past event, and a past event is of no value to us unless we can bring it to bear upon the problems of the present. Science and religion are alike in this, that they are, or should be, forward-looking and practical. They both make use of the records of the past for the interpretation of the present and for guidance in the future. The creeds of the church and the textbooks of science are of value, not because of the historic facts they contain, but because of what they tell us of the fundamental principles of the universe and human life that are permanent and perpetually applicable.[1]

The question whether man first appeared on this planet 6,000 or 600,000 years ago does not matter except in so far as we may learn from it how to extend his period of survival. What we want to know is how long man can exist: how long he has existed is in itself an

[1] This important point I have discussed on pp. 66 and 148.

idle question. The question of how man was made becomes of importance only when we come to consider what we can make of him. Then any minutest bit of evidence that we can gather concerning his history and ancestry becomes worth studying in the hope that it may aid us to some general laws as to the nature and development of living beings. Since we cannot tell in advance what will come handy in our reconstruction of the record of the world we gather up all the things that seem to have significance and preserve them in our museums and libraries, fragments of unknown fossils, broken bricks of cuneiform inscriptions, scraps of undecipherable writing, scattered and disconnected facts. But none of them is really of value until it can be fitted into the general scheme of things.

There are many such unrelated things in our museums; there are many in the Bible. Consider, for instance, the account of the creation of woman, which has somehow received less attention and aroused less discussion than the creation of man, though no man would say that it was an event of less importance. It appears to be a unique event. There is no record in Scripture or science of its having occurred before or since. The Bible does not imply that any other woman was ever made that way. The rector's wife in the town where I lived used to teach her class that all men to this day have one less rib than women because Adam was deprived of one, but I understand that this is not confirmed by anatomists, though I have to take their statements on faith, not having made any dissections myself. The incident is unrepeatable and hence un-

confirmable by experiment. Modern plastic surgery has taken out ribs and made them into leg bones but never so far into a complete woman.

What, then, can be done with the story of the creation of Eve? Nothing, absolutely nothing. A scientist may believe it a part of an infallible revelation or he may regard it as highly improbable that Eve was made in a way so different from other women, but he can neither prove nor disprove it. Whether he personally believes it or not can make no possible difference to his science, nor, so far as I can see, to his religion. Not Eve, but her living daughter, is his problem and ours.

Let me generalize this view of our relation toward the records of the past. Suppose I start a new religious sect having for its fundamental tenet that the earth was created instantaneously out of nothing by fiat of the Almighty on January 1, 1925. If I should take such a stand I might have difficulty in gaining converts but I could defy anybody to disprove my creed. Nobody could say that it was impossible, for it would be just as easy for Omnipotence to create a world in a second as in six days, or six hundred million years; create it complete, with people grown up, clothed, and housed, with all the evidences of a remote past already made, with fossils stored in the rocks, books stored in the libraries and memories stored in the minds. Sir William Osler tells us that he can remember when the professor of Natural Theology at Oxford argued that the fossils found in sedimentary rocks were no evidence of antiquity but were put there by Satan for the purpose of testing faith in the Bible; they were petrified

temptations to infidelity, so to speak. Other objections could be quite as easily disposed of. The Great War of course never occurred, but the histories and recollections of it were prepared by God for the purpose of warning the human race against such folly and cruelty in the future. The more I think about it, the more enamored I am of the polemic possibilities of this doctrine of recent creation. If anybody would hire Carnegie Hall for a joint debate on the question I believe that I could defend the thesis against any arguments that could be brought against it. Nobody has successfully confuted Archbishop Whately's *Historic Doubts Relative to Napoleon Bonaparte.*

The point is that we can never be certain of any event in the past in the same sense that we can be certain of an event that we can today observe and repeat at will. History must necessarily remain on an inferior plane of validity as compared with science, and the historical sciences such as geology and archeology can never attain the same certitude as the experimental sciences such as physics and chemistry. For example, we can never know for sure how life originated. It is surmised that in the early ages certain colloidal particles composed of compounds of carbon, hydrogen, nitrogen, and oxygen, perhaps in contact with a catalyst such as iron oxide, and under the influence of the ultraviolet rays of sunshine, might have acquired the power of feeding and fission, and so become the progenitors of all future living beings. Certain biologists even believe it possible under some such conditions to produce life now from inorganic matter and are experimenting to

this end.[2] Suppose some day they should succeed and find out a way of making an amœba out of the elements: it would not prove that life had originated on the earth in that fashion. It might have come about in some very different way. There is always a certain uncertainty about any record of the past, whether it be historical or geological, though the evidence for it may be irresistibly convincing to one who considers it.

Fortunately, no vital truth is altogether dependent for its validity upon the records of the past, although it may have been derived from their study. If the Fundamentalists were to burn up all the books on evolution, as the papers report they are being burned in certain communities of our country, if they should prohibit the teaching of evolution all over the world, that would not suffice. They would have to go further and chisel out all the fossils throughout the earth, for if they remain in the rocks somebody is sure to find them in time and draw the same inferences from them as to their age and origin. Suppose even this could be accomplished and all the paleontological evidences of evolution eliminated from the earth: evolution would still remain as active an agent as ever in the molding of living beings. Shutting our eyes does not affect the external world. It only makes us stumble about in it. Suppose that the Soviet should sweep over the earth and destroy all the sacred books of every faith. God would still reign and,

[2] "Experimental abiogenesis is the goal of biology."—Jacques Loeb. "With the astonishing means that modern science possesses already, with its continually increasing powers, I do not doubt that it will some day be sufficiently equipped to produce life artificially."—Paul Becquerel.

I believe, mankind would again find Him in various ways. God is not affected by what we think of him—fortunately. He is not annihilated when we forget him.

Whether evolution be theory or hypothesis is hardly worth discussing. What we need to know is how evolution acts. Whether evolution is fact or fable as applied to the past, it is a force in the present. We can ignore the past, or misconstrue it, without much harm, but we have to deal with evolution as a ruling power in modern life and a formative factor of the future.

Never was it so important that we should understand evolution, for never was it so active as at present, when new forms of plants and animals are being made to order and when man has, for good or ill, learned how to control the multiplication of the race. I quote from one of the leading geneticists of the country, Dr. C. B. Davenport, Director of the Station for Experimental Evolution,[3] at Cold Spring Harbor, Long Island:

> There are now thousands of forms of animals and plants that reproduce their kind which did not exist a century ago. Within the last ten years there have been produced scores of forms of the banana fly never before seen by the eye of man. Indeed, the very day on which the ancestors of some new types first appeared is known, and many of these types have persisted to the present day.
>
> We know indeed not a few forms which have appeared recently and which fulfill the essential conditions of species as the naturalist finds them in nature. These forms differ by two or more constant traits from other species. They are quite as infertile with other species as some wild species

[3] Note that the name is not "Theoretical" or "Historical" Evolution.

are with each other. The principal difference between them and wild species is that their beginnings have been seen and are known to be recent while that of wild species has not been seen and so their origin is of unknown date. But it is known that thousands of wild species that we have on earth today did not exist in earlier geological ages, just as there are thousands of species that lived in past geological ages that are not living today.

Nowadays we hear some of the opponents of Darwin asserting that no new species have arisen since the world began. This is amusing, for it shows that they have not even read the title of the book they are attacking. So let me give it in its full old-fashioned form as it appeared in 1857: "On the Origin of Species by Means of Natural Selection, or the Preservation of Favored Races in the Struggle for Life."

The point of Darwin's argument was that there occurred in nature a selective process similar to the artificial selection practiced by man. Nobody questioned the fact that it was possible by proper selection and breeding to develop new forms of dogs and pigeons, fruits and flowers, that were so distinct that if they had been found growing wild they would have been classed as different species. The only question—and this is questioned still by many good evolutionists—is whether the struggle for life in nature works the same way.

The importance of evolution as a policy appears when we think that the future of the human race and of any particular branch of it depends primarily upon the quality and character of its posterity. The theory of evolution has been a great stimulus to experimental

researches in heredity and many of its laws have been discovered and verified. It is now known that physical structure, mental abilities, and moral disposition are inherited according to mathematical ratios that can be calculated in advance, where the data are ascertainable. A child's talents are limited like his fingers.

Neither collective wisdom nor individual piety can prevent a nation from lapsing into incapacity and corruption if the breeding of coming generations comes from the inferior rather than the superior stocks of the community. It makes little difference in the long run how the people cast their ballots. The fate of the country is actually determined by how they combine their chromosomes. The finest form of government is futile unless it is managed by men of capacity. The purest form of religion is bound to degenerate if the quality of the population deteriorates.

By the application of such laws of eugenics as are already known, and without infringing upon conventional morality, it would be possible practically to eliminate feeble-mindedness and hereditary viciousness and to raise up a race that would be superior physically, mentally and morally to any that the world has hitherto known.

Very little can be done in this direction by legislation. Very much could be done by moral suasion, by holding up higher moral ideals, by instilling respect for the race, responsibility for posterity, and unsefishness in sacrificing present pleasures for the benefit of future generations; in short, by preaching.

Here is a most influential function that the church has languidly relinquished. While ministers are com-

plaining that the field of ecclesiastical activities has narrowed through the taking over by the state of education, charity, and the like,[4] they are neglecting a more important field to which they have historic claim and where they can exert a greater influence over the future than in any other possible way. In primitive religions the priest had a great deal to say about what marriages should be made. His modern successor mostly confines himself to the perfunctory performance of the marriage ceremony.

If a new religious sect should arise, composed of members of good hereditary stock and endowed with a sufficient variety of desirable qualities, if such a community should strictly segregate itself, geographically or socially, and maintain for a number of generations a high standard of marital relationship and child welfare, there would be developed a "peculiar people" that would stand as high above the average of the world as the highest races do now above the lowest. They could, if they desired, rule the rest of the world through force of sheer superiority of mind and moral purpose.

Something of this sort was attempted, according to Prof. Ralph E. Danforth, with the children of Israel but failed through their disobedience to the law of Jehovah. I quote from his article on "Religion as a Factor in Human Evolution": [5]

Paleontology shows us that single individuals, or single pairs, have been the starters of new species, rather than great masses of individuals. The plan which was laid down for Abraham, and conceived by him, would have produced

[4] See p. 32 on this point.

[5] In *Scientific Monthly*, Feb., 1925.

a new species of superior human beings if it had been consistently and unfailingly carried out. Even as it is, with all their breaches of the original sacred plan, the Jews are a remarkable people, decidedly distinctive in many ways, if not altogether in the ways originally planned. They came very near to producing a new and distinct human species, and although they fell short, they have pointed the way in which it can be done. . . .

The plan proposed for Abraham and his descendants involved pure line breeding, with careful selection of mates, and a code of ethics highly moral, sanitary and religious. The intense faith in the guiding supervision of God, the Creator of all things, was a support without which the plan never would have been carried out to such an extent and during so long a period of time.

The genetic principle of selection and rejection which some holy fathers have seen through a glass darkly in the form of a doctrine of divine election, and which we, using the symbolism of John the Baptist and of Jesus, may well call the principle of the ax and the fan, was foreshadowed in the plan of Abraham.

The plan of Abraham is as simple as nature itself, whose deepest laws it involves; and it is as sure as physics and chemistry through which God works, for any who will consistently follow it through the generations, a thing which the descendants of the old Abraham have done but faultily, very faultily. It is equally the plan of Jesus, the plan of nature, and the plan of the Kingdom of God and His righteousness.

It shocks our sensibilities to read in regard to the peoples of Palestine: "When your God puts them into your hands and you rout them, then you must exterminate them, making no compact with them and showing

them no mercy."[6] But we must not be too hasty in condemning this policy. If the Canaanites were as bad as they were painted, it would have been better for the Jewish race and for the world at large if the Israelites had obeyed the injunction of Jehovah instead of intermarrying with them as they did. But we cannot judge of that, for we have the history from only one side. Doubtless the "Book of the Wars of Jehovah,"[7] as written by the enemy, would read differently from that quoted in the Scriptures.

The method of selection as practiced in nature and primitive peoples, the relentless struggle for existence resulting in the survival of the fittest, involves appalling waste and terrible suffering. For lack of knowledge it was indiscriminating and sometimes failed of its object in spite of its cruelty.[8]

We can nowadays secure the same results by milder methods. We can, for instance, segregate, instead of slaughtering, individuals possessing defects of body or mind undesirable to perpetuate. Such negative and restrictive measures, however, would be of little avail unless accompanied by such positive eugenic measures as would encourage earlier marriage and larger families for the best of our young men and women. But this requires a religious zeal and spirit of self-sacrifice, a

[6] Deuteronomy 7:2.

[7] Numbers 21:14.

[8] For instance, if we assume that the Midianites were so hopelessly vile that their tribe were better wiped out, then Moses made the slaughter unavailing by not ordering the killing of the female children along with the male. As we now know, hereditary traits, good and bad, pass equally down the female line and the 32,000 Midianite maidens so saved were sufficient to contaminate the entire Hebrew race. Numbers 31:17, 18, 35.

sort of revival that no prophet has yet arisen to preach though the salvation of society depends upon it.

But whether we live according to our lights or not, the law is not abrogated. Natural forces continue to act, even though we ignore them. The word "now" in my text means *now,* not A.D. 26. It was an eternal truth that John was enunciating. The ax and the fan are perpetually at work, and if we do not pay heed to them, so much the worse for us.

Natural selection is slow, cruel, and cumbrous. We can produce new forms of plants and animals better and quicker than nature can, as a visit to any exhibit of horticulture or animal husbandry will show. That is what our intelligence was given us for, that we may improve upon the crude methods of nature.

But while we strive to improve upon them we must not forget that we owe to them the development of social virtues as well as personal prowess. A species may survive and succeed in the struggle for existence through the development of coöperation, of maternal or paternal care for offspring, of self-sacrifice for the community, of ability to live with another race. It is this that has produced the law of the pack, the spirit of the herd, the communism of the hive and ant hill, the commensalism of marine animals and insects, the home life of the nest.[9]

The close relation between evolution and religion is well brought out by Prof. William Patten, who teaches evolution in Dartmouth College:

[9] This side of evolution, too often overlooked, is emphasized in Drummond's *Ascent of Man,* Kropotkin's *Mutual Aid,* and Patten's *Grand Strategy of Evolution.*

The compelling pragmatic law, which Darwin so clearly saw in operation in plant and animal life, and which he called "Natural Selection," is the same law that is so clearly expressed in biblical teachings, as, for example:

"And even now the ax is laid unto the roots of the trees: therefore every tree which bringeth not forth good fruit is hewn down and cast into the fire. . . . But the root of the righteous shall not be moved."

Thus science and religion offer the same incentives to action and have the same purposes to accomplish; and science expresses in her more comprehensive formulas precisely what all the great religions of the past and present have tried to express in their teachings, but without that sure and intimate knowledge of Nature-action which science gives us, and which is so essential to the truthfulness and sanity of any kind of religion. . . .

And so, it seems to me that the study of evolution, *as a whole,* more than anything else, will help to minimize the antagonism between religiously minded and scientifically minded people, and will help them to work more peacefully and happily together. For young and old, for high-brow and low-brow, the study of evolution makes life more significant and more beautiful. It justifies their faith and fortifies their ideals. It makes God a more immanent reality. It helps all of us to understand the purpose of life, and how to accomplish it.

That is why I teach evolution.

To those who say that a man cannot be an evolutionist and a Christian, we may reply after the manner of the man who was asked if he believed in infant baptism. "Believe in it!" he answered. "Why, of course! I've seen it." So we have all seen Christian evolutionists, thousands of them, and their existence cannot be

denied even by those who think they are inconsistent and should abandon their religious or scientific beliefs.

Timid souls who have become alarmed at the idea that religion and science are inevitable antagonists should be assured by the "Joint Statement upon the Relations of Religion and Science" which was drawn up in 1923 by Prof. R. A. Millikan, of the California Institute of Technology and Nobel prizeman, and reads as follows:

We, the undersigned, deeply regret that in recent controversies there has been a tendency to present science and religion as irreconcilable and antagonistic domains of thought, for in fact they meet distinct human needs, and in the rounding out of human life they supplement rather than displace or oppose each other.

The purpose of science is to develop, without prejudice or preconception of any kind, a knowledge of the facts, the laws, and the processes of nature. The even more important task of religion, on the other hand, is to develop the consciences, the ideals, and the aspirations of mankind. Each of these two activities represents a deep and vital function of the soul of man, and both are necessary for the life, the progress, and the happiness of the human race.

It is a sublime conception of God which is furnished by science, and one wholly consonant with the highest ideals of religion, when it represents Him as revealing Himself through countless ages in the development of the earth as an abode for man and in the age-long inbreathing of life into its constitutent matter, culminating in man with his spiritual nature and all his Godlike powers.

This statement was signed by a number of the foremost scientists, religious leaders, and men of affairs of

the United States, whose names appear on pages 244-461—a representative group of prominent men.

No one can question either the ability or the sincerity of such men as these, and since their adhesion to the declaration is purely voluntary it is evident that they find no essential incompatibility between a personal religious faith and a scientific view of the universe. The list of signers could be extended indefinitely; in fact, the statement probably represents in general the position of most of the educated and moderate-minded men of our time and country.

It is a curious feature of the present situation that the laity are more alarmed over the advances of science than the clergy. That is, those who know the most about theology and who have most at stake in the church are most willing to welcome historical criticism and scientific research. The real conflict is not between science and religion as such, but rather between dogmatic and intolerant religionists and scientists on the one side and liberal and tolerant religionists and scientists on the other side. It is more a difference of temperament than of opinion. The effort to fetter freedom of investigation or to force thought into fixed formulas is equally fatal in science and religion.

Overmuch fear of heresy indicates lack of faith. Scientific men have such absolute confidence in the validity of the scientific method that they permit their most fundamental principles to be challenged even in their own societies. Chemists listen without a shudder to destructive attacks upon the immutability of the elements and the indivisibility of the atom. The Royal Society of London even applauds a speaker who sets an

upstart foreigner like Einstein above Newton, one of its earliest and most venerated members.

The papers have reported a half-dozen cases of professors who have been dismissed from educational institutions under ecclesiastical control for teaching evolution, but there has been no retaliation from those whom some call the "enemies of religion." I have never heard of the National Academy of Sciences expelling a member because he was suspected of being a Presbyterian or of the American Association for the Advancement of Science blackballing a man because he had been baptized. Girard College is the only institution that excludes clergymen by charter and I understand that the doorkeeper there is not very vigilant in searching every visitor to see if he has a dogma concealed about his person. If we begin to rewrite our textbooks in science to suit a single sect, or section of a sect, we may soon have Methodist and Baptist zoölogies, Protestant and Catholic chemistries, Jewish and Christian theories of gravitation, as we now have northern and southern histories, and proletarian and capitalistic economics.

What I have said here is not for the purpose of advocating or explaining evolution, or to show its relation to religious thought. There are plenty of books on such subjects. But I want to urge Christian thinkers to devote more attention to this, as well as to other scientific theories, in order to determine their theological bearing and ethical application. Some clergymen denounce evolution at sight as a dangerous novelty, which is foolish. Others accept it docilely and indifferently, as they do Newton's laws of gravitation or the nebular

hypothesis—"doubtless it is true since the scientists say so, but it is none of my business"—which is almost equally foolish. For, as I have tried to show, it is very much their business, although they are not qualified to take an active part in its experimental verification and development. The doctrine of evolution is capable of very pernicious perversions both in theory and in practice, as the world has seen. It has been adduced as justification of the claim that "Might is right." The "survival of the fittest" has been interpreted as the "survival of the fightest."

But we may draw from it lessons more consonant with Christian ideals and ethics, as Tennyson did in the days when Darwinism was young and viewed with much aversion:

The Lord let the house of a brute to the soul of a man,
  And the man said, "Am I your debtor?"
And the Lord—"Not yet: but make it as clean as you can,
  And then I will let you a better."

. . . . . .

If my body come from brutes, tho' somewhat finer than
    their own,
  I am heir, and this my kingdom. Shall the royal voice
    be mute?
No, but if the rebel subject seek to drag me from the throne,
  Hold the scepter, Human Soul, and rule thy province of
    the brute.

Signers of the Joint Statement upon the Relations of Science and Religion

Religious Leaders

Dr. John D. Davis, Presbyterian, Professor Old Testament Literature, Princeton Theological Seminary.

Bishop William Lawrence, Episcopalian, Boston.

Bishop William Thomas Manning, Episcopalian, New York.

Dr. Henry van Dyke, Presbyterian, preacher and poet, Princeton, N. J.

Dr. James I. Vance, Presbyterian, First Presbyterian Church, Nashville, Tenn.

President Clarence A. Barbour, Baptist, Rochester Theological Seminary.

President Ernest D. Burton, Baptist, University of Chicago.

President Henry Churchill King, Congregationalist, Oberlin College.

Dr. Robert E. Brown, Congregationalist, Second Congregational Church, Waterbury, Conn.

Bishop Francis John McConnell, Methodist, Pittsburgh, Pa.

Dr. Peter Ainslie, Disciple, Christian Temple, Baltimore, Md.

President William Louis Poteat, Baptist, Wake Forest College, N. Car.

Bishop Joseph H. Johnson, Episcopalian, Los Angeles, Calif.

President James Gore King McClure, Presbyterian, McCormick Theological Seminary, Chicago.

Dr. Merle N. Smith, Methodist, First Methodist Church, Pasadena, California.

Dr. Herbert L. Willett, Disciple, Theologian, Associate Editor *Christian Century,* Chicago.

Scientists

Charles D. Walcott, geologist, President of the National Academy of Sciences, President of the American Association for the Advancement of Science, and Head of the Smithsonian Institution of Washington.

Henry Fairfield Osborn, paleontologist, President of the American Museum of Natural History, New York.

Edwin Grant Conklin, zoölogist, Head of the Department of Zoölogy, Princeton University.

James Rowland Angell, psychologist, President of Yale University.

John Merle Coulter, Head of the Department of Botany, University of Chicago.

Michael I. Pupin, physicist and engineer, Professor of Electro-mechanics, Columbia University.

William James Mayo, surgeon, Mayo Foundation for Medical Education and Research, Rochester, Minn.

George David Birkhoff, Head of the Department of Mathematics, Harvard University.

Arthur A. Noyes, chemist, Director of the Gates Chemical Laboratory, California Institute of Technology, Pasadena, Calif.

William Wallace Campbell, astronomer, Director of Lick Observatory and President of the University of California.

John J. Carty, engineer, Vice-President in Charge of Research, American Telephone and Telegraph Company, New York.

Robert A. Millikan, physicist, Director of Norman Bridge Laboratory of Physics, Pasadena, Calif.

William Henry Welch, pathologist, Director of the School of Hygiene and Public Health, Johns Hopkins University, Baltimore.

John C. Merriam, paleontologist, President of the Carnegie Institution, Washington, D.C.

Gano Dunn, engineer, Chairman of the National Research Council, Washington, D.C.

Men of Affairs

William Allen White, editor, *Emporia Gazette,* Emporia, Kans.

Herbert Hoover, Secretary of Commerce, Washington.

James John Davis, Secretary of Labor, Washington, D.C.

David F. Houston, ex-Secretary of the Treasury, New York.

Frank O. Lowden, ex-Governor of Illinois, Oregon, Ill.

John Sharp Williams, ex-United States Senator, Yazoo City, Miss.

Rear Admiral William S. Sims, Commander United States Naval Forces in European waters during the World War, Newport, R.I.

Harry Bates Thayer, President, American Telephone and Telegraph Co., New York.

Julius Kruttschnitt, Chairman of the Executive Committee, Southern Pacific Railway, New York.

Frank Vanderlip, ex-President National City Bank of New York, Scarborough, N.Y.

Henry S. Pritchett, President Carnegie Foundation for Advancement of Teaching, New York.

Victor F. Lawson, publisher, Chicago *Daily News,* Chicago.

John G. Shedd, ex-President Marshall Field & Co., Chicago.

Elihu Root, ex-Secretary of State, New York.

A SERMON WITHOUT TEXT OR MORAL

THERE are a great many things about the ministry that puzzle a layman. One is the very small amount of the Bible which is utilized for homiletic purposes. It might be supposed that in listening to sermons at the rate of a hundred a year a man would in the course of a lifetime hear the most of the available portion of the Bible treated didactically; but this is not the case. In reading the Bible one is always striking verses which seem to him, in his unprofessional ignorance, well adapted for texts but which he cannot recall having heard sermons upon, and he wishes his minister would put a slot-box in the vestry into which the congregation could drop the texts they want to hear discussed.

For example, a great deal of attention is now being paid to questions of political economy in the pulpit, so much that if all we knew of the Bible was what we get from some of our modern preachers we would suppose it to be purely a treatise on that subject; yet there is one excellent text for sermons of this class which seems to be neglected. I allude to the last clause of the fourteenth verse of the third chapter of the Gospel of Luke, *"Be content with your wages."*

We all know the occasion for the admonition. The Roman soldiers did a great deal for civilization. They were the cement which held together the most stable and extensive of the ancient empires. They maintained order among a hundred nations and enforced peace for

the first time on rival sects and castes. They gave a new meaning to the conception of law. They established some degree of justice where the caprice of despots had been the only power. But "single men in barracks don't grow to plaster saints." They had their faults and John kodaked them as accurately as he did the Pharisees, the publicans and the multitude. They did, as he said, sometimes take advantage of their position of public police to accuse men falsely, they were often brutal and rough in their treatment of the subject populace and they were given to striking for higher wages.

What strikers they were, when you think of it! They struck for less work and more holidays; they struck for more spoils of war and less weight to carry. They struck because the weather was too hot and they struck because the water was too cold. They struck whenever a popular leader was removed, and if no other excuse presented itself they struck for recognition of the legion. And when new legions were formed with recruits from the recently annexed portions of the empire they struck against the admissions of "barbarians," a word that meant the same as "scabs" does now. In every great emergency, in any crisis when it was particularly necessary that all classes should work together for the common good, the legions could be depended upon to strike for higher wages. The election of an emperor was their great chance, and finally it came to be recognized that the man who promised most to the soldiers would be emperor. Politicians catered to the legion vote. That is why Rome fell. There are fifty-six other reasons why Rome fell, for which

see commencement orations, but they are for use with other subjects.

Some possible reasons occur to me why ministers do not preach from the text "Be content with your wages." One is that it may not be applicable to the present time. If so, it is a good reason. Preachers no longer use the biblical denunciations against the worship of graven images and ceremonial pollutions because these are not modern vices. It may be that there are now no people discontented with their wages, that all employers pay as much as they can afford, that every employee realizes that he is getting as much as he deserves and that the world has become so far Christianized that we can delight to see others prosper more than ourselves. It may be that there is now no class which strives to advance its private interests regardless of the inconvenience and injury to the public that may come from the means they employ. If, then, there are none who attempt to get better wages by violence or false accusation, the clergy are right in treating the text as obsolete.

There is another possible explanation why this text is not used—and I must confess that this is not original but was suggested to me by a minister. I really never should have thought of it myself. It is that preaching from such texts would "alienate the masses." This is certainly a great objection. In fact it is insuperable. It has always been the great obstacle to the spread of Christianity that preaching the gospel has a tendency to "alienate the masses." It is perhaps not too much to say that if it had not been for this all the world would have been Christian long ago. It must be extremely difficult for a pastor of a mixed congregation to preach

"the truth, the whole truth, and nothing but the truth" and not "alienate" somebody. I do not see how he can do it. And the masses, above all. There are only a few preachers who have millionaires in their congregations, so rich men are fair game. You can learn all about their vices in the newspapers and there are lots of good texts in the Bible to use against rich men, more than any preacher can use up in a lifetime; but if he alienated the masses the church would be empty and his sphere of usefulness curtailed. I see that.

Perhaps John thought that their wages were high enough. But their regular pay was only about ten cents a day and often they did not get that because of graft by the men higher up. It would be unwise to establish this as the maximum wage on scriptural authority.

Another reason why this text is not used may be that it is not considered inspired. But the most critical of my commentators does not question it and the most modern of my translators does not alter the sense of the passage. It was spoken by the greatest prophet ever born of woman, but that would not prevent its being rejected by the highest critics. The "higher critics" are those who throw out any passage which they do not understand; the "highest critics" are those who deny the inspiration of anything they do not like. It is an easier method than that of the higher criticism, does not require so much scholarship, and it is more successful. It is really the only way to get a Bible which is perfectly satisfactory to oneself and the congregation. Inspiration is of course not confined to the past. We are all of us infallible, more or less, and "they didn't know everything down in Judee." Some

ministers go so far as to preach the virtue of "divine discontent." Discontent does seem a queer attribute for the Deity, but probably it is all right. Only if contentment is no longer one of the Christian virtues, let us know it at once and we will stop our feeble and painful efforts to cultivate it.

EACH IN HIS OWN TONGUE

Unless, in using the gift of "tongues" you utter intelligible words, how can what you say be understood? You will be speaking to the winds! There is, for instance, a certain number of different languages in the world, and not one of them fails to convey meaning. If, however, I do not happen to know the language, I shall be a foreigner to those who speak it, and they will be foreigners to me, . . . Therefore let him who, when speaking, uses the gift of "tongues" pray for ability to interpret them.—I Corinthians 14:9-11, 13 (Twentieth Century Version).

Not long ago I had to change trains at a junction and found that I had run out of reading matter for the long journey before me. There were only five minutes between trains and I had no time to choose according to my taste. So I decided to take as my guide the voice of the people, and making a dash at the newsstand I asked the dealer: "Where is your shelf of best sellers?" He pointed to a row of new books and there I saw among the detective stories and jazz novels three books of another sort: Papini's *Life of Christ*, Van Loon's *Story of the Bible*, and Goodspeed's modern English version of the New Testament.

Now what was there in common between the brilliant and uncritical picture of Christ by an Italian ex-atheist, the colloquial and modernistic narration of biblical stories by an American journalist, and the scholarly and literal translation of a theological professor that should place these three rather expensive volumes among the best sellers of the day? Simply that all

three were in their several ways fresh and unconventional presentations of the Bible. Their popularity showed that the people of today will read the Scriptures if they are translated into the language of today. The Bible is perpetually among the best sellers but only when it is put into a new and modern form does it attract the attention of the general reader.

There are two classes of people who will be benefited by a modern English translation of the Bible: those who are familiar with the present version and those who are not. As we cease to hear the ticking of a clock after listening a while, so those who have heard, read, or memorized portions of the Scriptures every day since babyhood, and always in the same words, have lost the power of perceiving their deep and vivid meaning. On the other hand, to those who have not been so trained the biblical language seems strange, quaint, and affected, and it is difficult to persuade them that anything which sounds so foreign and antiquated can be of practical value to them.

To older Christians any change in the phrases which have been their comfort in sorrow and the expression of their deepest emotion gives a shock like the singing of a hymn to an unaccustomed tune, but a new generation is continually coming on, and it is a question whether we shall train them in an acquired taste for the ancient phraseology and so fix a gulf between their religious and their daily life or give them the Gospel in their own language. We do not nowadays need so much a greater attachment and reverence for established words and forms as we do a fresh presentation of the message of God to the modern world. There is

not such a change in the English of the last three hundred years as to make any considerable portion of our Bible absolutely unintelligible to the ordinary reader. There are not many passages in the Authorized Version which seriously distort the sense, and with the abundance of dictionaries, no one need be misled by these. But tone and style are just as important factors in a translation as verbal accuracy, and in this respect the Revised Version is no improvement over the old. The chief fault with the Authorized Version was not that it was inaccurate, but that it was antiquated, and the Revised Version is much the same.

Difficult as the art of translating is, its aim is very simple. It is, to produce on the readers of another language the same impression as was produced on the readers of the original. The Bible as a message to our own times is of greater importance than it is as an English classic. Paul did not write in the Greek of Homer, and we should not translate him in the English of Shakespeare. Paul's Greek was to his contemporaries about what good newspaper English is to us. It is brisk, everyday language; not overburdened by grammatical scrupulosity; not in the least quaint, archaic, or affected. Doubtless some of Paul's vigorous and unconventional phrases borrowed from the shops, the barracks, and the prize ring shocked the literary sensibilities of the *précieuses* of Corinth.

What is wanted in any translation of an ancient work, as also in a historical novel, is not the effect of antiquity, but of contemporaneity. The object of reading such a work is to be transported back to the age which it depicts, and any affectation of the archaic de-

stroys the illusion, because no age appears antiquated or peculiar to itself. To publish nowadays a new or a revised version in the language of King James is morally and esthetically allied to the practice of filling the grain of oak furniture with lampblack to give an "antique finish." It is like translating a German novel into broken English to give it a foreign flavor.

A large part of a Dictionary of the Bible is taken up with explaining the meaning of the English words used in our common version—that is, in translating the translation. This is a very valuable feature of the dictionary—the pity of it is that something essentially so unnecessary should be so much needed. A new translation has the further advantage of getting rid of theological phraseology. Every word in the Authorized Version is weighted down with a pile of scholastic tomes. We are forced to read the gospel message through spectacles dim with the mists of eighteen centuries of commentation and controversy. This is like the practice that used to prevail in the schools of studying Greek from Latin textbooks.

But we need not discuss the question whether seventeenth-century English represents ancient Greek better than does twentieth-century English. The use of the second person singular and of obsolete words and idioms may give an agreeable literary flavor to the educated taste, but that does not decide the matter. What we want to know is whether the average man, woman, and child will get by using them a fresher and more vivid realization of the meaning of the message of the Bible to them. We are not obliged to decide from theoretical grounds alone, for the experiment is easily

tried. There are several translations of the New Testament in modern English on the market; I have seen them tested under widely different circumstances, and they were always received with a hearty welcome and no opposition. Students at the university, prisoners in the penitentiary, and the ordinary church congregations are alike more interested and impressed than when the ordinary version is used. It is a strange sight to look down from the pulpit and see the congregation really listening to the customary reading of the lesson. But most marked of all are the results of its use with the young people's societies. To have boys and girls beg the leader to read longer to them in the New Testament, to have them borrow it from each other, and sit up nights to read it through like the latest novel, is sufficiently unusual to merit attention.

The more new translations the better. The important thing is to keep any one of them from becoming "authorized." In the multiplicity of sects there is a chance for the true Christianity to develop. In the multiplicity of versions there is a chance for freedom from the bondage to the letter. When each scholar in the Bible class has a different version there will not be so many hours wasted in quibbling over the technical meaning of some English words. They will be obliged to study the thought. Many persons who do not read the original tongues find it advantageous to read the Bible in French or German, not because these versions are better than ours, though they are because less antiquated, but because they get a better insight into the meaning through the unaccustomed words.

Paul's letters in particular show a gain in vividness

and modernity, as the following passage from the *Twentieth Century New Testament* will show:

I wish you would tolerate a little folly in me!—as indeed you really do. I am jealous over you with a jealousy like the jealousy of God. I gave you in marriage to one husband, that I might bring into the Christ's presence a pure bride. Yet I fear that it may turn out that, just as the Serpent by his craftiness deceived Eve, so your minds may have lost the loyalty and purity due from you to the Christ. For if some newcomer is proclaiming a Jesus other than the one whom we proclaimed, or if you are receiving a Spirit different from the one which you did receive, or a Good News different from that which you welcomed, then you are marvelously tolerant! I do not reckon myself in any way inferior to the most eminent apostles! Though I am not a trained orator, yet I am not deficient in knowledge; indeed, we made this perfectly plain to you in everything.

With reference, indeed, to the Fund for your fellow-Christians, it is really superfluous for me to say anything to you. I know, of course, of your willingness to help, and am always boasting of it, when speaking about you to the Macedonians. I tell them that you in Greece have been ready for a year past. It was really your zeal that stimulated most of them. My reason for sending our Brothers is to prevent what we said about you proving in this particular matter an empty boast, and to enable you to be as well prepared as I have been saying you are. Otherwise, if any Macedonians were to come with me and find you unprepared, we—to say nothing of you—should feel ashamed of our present confidence.

A living faith must be expressed in living language. The chief foe of vital religion is antiquarianism. An

old and neglected city becomes buried under the accumulated débris of the passing years. In the course of time it becomes hidden from view and forgotten, although there may still linger about the site some dim tradition of its historic greatness. But when the skilled archeologist excavates the mound, carefully removing the encumbering dirt layer by layer, and religiously restoring the buildings and preserving the utensils of daily life, there stands revealed to us the original city, not as a ruin and a relic, but as the abode of life; and for the first time we get a feeling of kinship and understanding for the ancient people who once trod its streets and worshiped in its temples, who met the same temptations and struggled with the same sins as we.

So it is with an old book which through neglect or misplaced reverence has become encumbered and obscured by the accumulation of obsolete expressions. It, too, has to be dug out and restored before it can seem real and lifelike to us again, before we can see it as it was in the beginning. For many books this does not matter. Let them get dusty and moldy as they will. Once in a long while we will take down the venerable volume from the shelf and spend a few minutes turning over its yellow pages. We find a certain pleasure in puzzling out the meaning from its antiquated spelling and strange phraseology. We are amused at recognizing familiar thoughts disguised in these "olde cloathes," but we may be sure that this was not the impression that the author intended to convey. The vellum volume contains perhaps the pamphlets of some pugnacious politician or the sermons of a protesting divine, a modernist of the modernists of his time, and he would rather

never be read at all than be regarded as a quaint relic of antiquity. It really is not treating him fairly to read him in this spirit, and he has the right to resent it.

The books that most need translation are those several centuries old in what is nominally our own language but which is really quite different. The words seem the same and the modern reader assumes that they mean to him what they meant to contemporaries, whereas many of them have suffered a subtle alteration in essence or in atmosphere through the lapse of time. If a man does not know a word of Greek he does not venture to interpret the meaning of a passage in the Greek classics. But when he reads the authorized version of the Bible he may be unconsciously misled as to the meaning of the language, and he may stake his soul's salvation or may condemn a brother as a heretic, on the basis of a single text of which he no more understands the meaning than he does of the original Greek or Hebrew.

Only experts in Elizabethan English can understand Shakespeare, and they do not agree about it. The Variorum edition devotes pages to the interpretation by different commentators of a single word, and often in the end they give it up as incomprehensible. Such critical speculations form an interesting intellectual exercise, but it really does not matter after all what Shakespeare meant by any obscure word or passage. Nobody holds Shakespeare to be divinely inspired in the theological sense, and nobody takes the plays as an infallible rule of faith and practice, so the reader is none the worse if he has misconstrued a phrase or two.

For instance, Shakespearean scholars tell us that the common quotation, "Conscience does make cowards of us all," does not mean what it is commonly quoted to mean. But who cares? It's a handy quotation anyhow, whatever the author may have meant by it. So too Biblical scholars tell us that the oft cited saying of Job:

> For I know that my redeemer liveth, and that he shall stand at the latter day upon the earth.
> And though after my skin worms destroy this body, yet in my flesh shall I see God,

should rather be read in this way:

> "Still, I know One to champion me at last, to stand up for me upon earth,
> This body may break up, but even then my life shall have a sight of God," [1]

or this:

> "But as for me I know that my Vindicator liveth,
> And at last He will stand up upon the earth:
> And after my skin, even this body, is destroyed,
> Then without my flesh shall I see God." [2]

This remains an inspiring and inspired passage, however it may be worded, but obviously it is not right to use it as a "proof-text" for three such serious dogmas as the redemptive function of Christ, the resurrection

[1] Moffatt's translation.
[2] Aked's *The Divine Drama of Job.*

of the body, and second advent. The only cure for the literalism and verbalism which strangles the life out of religion is the multiplicity of versions. "For the letter killeth, but the spirit giveth life."

The classicists are beginning to realize the value of real translations that carry the spirit as well as the sense of the original. Many such have recently appeared that enable those of us who neglected the ancient languages in our youth to see for the first time something of what our classical friends are so enthusiastic about. The Loeb Library has opened up a new world to me, the world of Greek and Roman life. I have read most of the volumes halfway through, for I read them with eyes to the right. In this series as a rule the colloquial passages are rendered into colloquial English with little affectation of the archaic. I have all my life been a devoted reader, however delinquent a follower, of Marcus Aurelius as revealed in his Meditations. But I got better acquainted with the man himself when I read his letters to his teacher, Fronto, and found that he was not afraid to use slang and puns on occasion. For instance,

> In future be chary of telling so many fibs, especially in the Senate, about me. This speech of yours is awfully [3] well written. Oh, if I could only kiss your head for every heading of it! You have absolutely put every one else in the background.

This reads like one of Roosevelt's letters to Lodge, and it should.

[3] *Horribiliter.*

The worst enemies of the Bible are those who regard it as "mere literature." They hold the King James version sacred because they have ceased to hold the original sacred. I clip a typical comment from a current editorial:

> It is as ridiculous to translate the King James version into colloquial English as it would be to play the same trick with *Hamlet* or with Milton's *Areopagitica*. The authorized Bible as it now stands is a piece of unexcelled literary workmanship. Leaving out of consideration altogether its religious import it has the charm of a magnificent style, which should not be tampered with.

"Leaving out of consideration altogether its religious import"—exactly, that is just what such people do. The editor is so ignorant of what he was writing about that he does not know that the King James version was written in colloquial English and that the New Testament was written in colloquial Greek. He thinks it was written in blank verse like *Hamlet* or in stately Latinized prose like the *Areopagitica*, which in itself shows how misleading the King James version has become.

As a matter of fact our Authorized Version dates rather from 1535 than 1611, for "it is not too much to say that William Tyndale wrote nine-tenths of the King James New Testament." [4] And what Tyndale intended to we can best learn from his own words in reply to one of his opponents: "If God spare my lyfe, ere many years I wyl cause a boye that dryveth the plough shall know more of the scripture than thou dost." He says

[4] Goodspeed's *The Making of the English New Testament*, p. 51.

that he "perceaved by experyence how that it was impossible to stablysh the laye people in any truth, excepte the scripture were playnly layde before their eyes in their mother tongue"—"which thinge onlye," he adds, "moved me to translate the New Testament." [5]

Tyndale was a learned man, M.A. of Oxford and P.G. of Cambridge, and he could have written in the style of *Euphues* if he had wanted to, but he deliberately rejected all pedantry and affectation in order that he might lay the Scriptures before the eyes of the lay people in their mother tongue. Luther had the same aim, and when he was translating the Bible into German he went down into the market place so that he might catch the racy vernacular of the day. The result was that these versions became the literary masterpieces and models of the English and German languages.

Of course Tyndale's translation met with heated opposition, as does every effort to bring the Bible to the people. But even today I doubt if any of the opponents of contemporary versions can handle the vocabulary of abuse with such splendid vigor as did Cochlæus in attacking Tyndale:

> The New Testament translated into the vulgar tongue is in truth the food of death, the fuel of sin, the veil of malice, the pretext of false liberty, the protection of disobedience, the corruption of discipline, the depravity of morals, the termination of concord, the death of honesty, the well-spring of vices, the disease of virtues, the instigation of rebellion, the milk of pride, the nourishment of contempt,

[5] Goodspeed, p. 4. If we really want the antiquated flavor we must preserve the original spelling.

the death of peace, the destruction of charity, the enemy of unity, the murderer of truth.[6]

And the funny thing about it is that the version that Cochlæus was fighting for, the Vulgate, was itself a translation into the vulgar tongue, Latin, and when Jerome produced it in the fourth century "it was vehemently attacked as an unwarrantable innovation, even by a man like Augustine." Intolerance and conservatism are the same in all ages. It is a reaction that can always be relied upon, whatever else changes. Not many years ago, when an attempt was made to translate the New Testament into modern Greek, a riot was precipitated in Athens, in which people were killed.

In India, during the Sena dynasty of the eleventh century, the Buddhists, who were the heretics of that age, introduced the vernacular into religion, but the Brahmans opposed it with this ringing declaration:

> Who hears the eighteen Puranas or the Ramayana in Bengali will be thrown into the hell called Rourava.

I do not know what are the heating facilities of the hell called Rourava, but I presume it is not hot enough to satisfy our present-day Brahmans who adhere to the King James version on the ground that "the language Paul and Moses spoke is good enough for me."

The need for new versions is apparent when we learn that the Greek text that Tyndale translated was that compiled by Erasmus in 1516 from five fragmentary manuscripts of the eleventh to the fifteenth centuries.

[6] Goodspeed, p. 8.

Now scholars have at their disposal 150 manuscripts dating from the third to the ninth centuries. As Professor Goodspeed says: "We now possess a Greek Testament under every word of which there goes down a foundation of manuscript evidence fifteen hundred years deep into the past." More than that, we know for the first time the language of the New Testament, for the recent discovery in Egypt of a mass of Greek letters on papyrus proves that it was written in the vernacular of the time, which was very different from the literary style.[7]

The British scholars who spent ten years, 1870-80, in revising the New Testament adopted as their first principle "to introduce as few alterations as possible into the text of the Authorized Version consistently with faithfulness." The American revisers who published their version in 1901 were less conservative but still regarded it as "no part of our task to modernize the diction of the Bible." Yet they cleared up many obscure and misleading passages that had perplexed the devout and alienated the skeptical. Two mythical monsters were removed from the zoölogy of the Old Testament. The dragons that howled in waste places are converted into jackals, and the unicorns into wild oxen. The two-horned unicorn [8] involved a verbal contradiction that strained the faith of the literalist who held to the infallibility of the Authorized Version. Passages like Jeremiah 4 :19 and Lamentations 1 :20 were,

[7] For a popular account of the discovery of the letters of the time of Christ, showing that the Epistles and Gospels were written in the vulgar tongue, see *Saturday Evening Post,* May 30, 1925.

[8] Of Deuteronomy 33:17.

as the American revisers say, "both unpleasant and incorrect."

With the question of biblical phraseology is involved that of the language of prayer. To speak the English of the seventeenth century as fluently and as carelessly as one's mother tongue requires constant training from childhood. Every one who has had experience with the devotional services of young people knows that one reason why it is so hard to induce them to offer public prayer is that they must speak in what is practically a foreign tongue. They have never used the second person singular, and they often blunder in trying to convert a modern verb into the ancient form, exciting the risibilities of the frivolous and experiencing a feeling of embarrassment quite out of proportion to the insignificance of the mistake. They are only safe when using the familiar language of the Bible, so the ordinary public prayer consists largely of a more or less skillful collocation of Scriptural phrases representing very imperfectly the real feelings and aspirations of the speaker. The only advantage which extemporary prayer has over written is thus sacrificed, and what should be the simplest and most spontaneous expression of heartfelt emotions becomes a troublesome literary exercise. It would be interesting to know how many people in private prayer adopt these forms and how many use their natural language. My own opinion is that many Christians in their most earnest private devotions drop all obsolete idioms and grammatical constructions. If that is so, there would seem to be no good reason for assuming them in public, for there is no ground for thinking that the Lord takes

special delight in an address couched in antiquated phraseology.

Many evangelistic and Salvation Army songs mix "thee" and "you" in the same sentence in a way which is very amusing from a literary standpoint but, considered further, is encouraging, as it shows the struggles of common sense breaking through conventionality, and proves that living religion cannot be forever bound in dead ecclesiastical forms. Let us have confidence in our own religious feelings and in the possibility of expressing them in our own language. Let us believe in ourselves and in the twentieth century. Suppose you associated the word "ghost" only with a degrading superstition. How would the phrase "Holy Ghost" strike you? If your only idea of a king was something akin to slavery, or polygamy, or feudalism, something to be hated and overthrown, how would the monarchical phraseology of the church impress you? What would you think of a man who used "thou," and "thee" and "ye," and could give no reason for doing so except that it was done in 1611? In reading the Bible, would you not be frequently like the Ethiopian eunuch, "reading without understanding"?

The custom of reading passages of Scripture in schools is a good one for literary and religious reasons, but for both reasons it is a serious mistake to prescribe the use of the King James version alone when there are more truthful versions to be had. Various versions should be used in turn, or together, so the students may turn their attention to the meaning and not fall into the superstition of believing that there is something magical in the repetition of certain archaic words and

phrases. How would a professor of chemistry or biology like it if he were required to use a seventeenth century textbook?

Oliver Wendell Holmes warns us of the danger of "polarized" words, that is, language that has become so familiar and fixed that it has lost its meaning and vividness:

> Time only can gradually wean us from our Epeolatry, or word-worship, by spiritualizing our ideas of the thing signified. Man is an idolater, or symbol-worshiper, by nature, which of course is no fault of his; but sooner or later all his local and temporary symbols must be ground to powder, like the golden calf,—word-images as well as metal and wooden ones. Rough work, iconoclasm, but the only way to get at truth.
>
> Skepticism is afraid to trust in depolarized words and so cries out against a new translation. I think, myself, if every idea our Book contains could be shelled out of its old symbol and put into a new, clean, unmagnetic word, we should have some chance at reading it as philosophers, or wisdom-lovers, ought to read it.—When society has once fairly dissolved the New Testament, which it has never done yet, it will perhaps crystallize it over again in new forms of language.[9]

The primary purpose of the Protestant Reformation was to put the Bible into the language of the common people, but modern Protestants have so far forgotten the fundamental principle of their faith that they are content to hear from the pupit an antiquated and inaccurate version of the Holy Scriptures. The pastor pur-

[9] *The Professor at the Breakfast Table.*

ports to be reading the veritable revelation of God yet knows in reading certain passages that the words do not mean what they seem to mean, and the congregation does not know what they mean at all.

All who value the truth above tradition, all who believe that the Bible is something more than mere literature, all who believe that the Bible has a message for the world today which should be delivered directly and correctly—in other words, all sincere Christians—will prefer a modern version. All who worship words and care not for their meaning, all whose religion consists in verbal vesture, all who fear that the Bible will lose its sanctity if presented in plain English, all who fear that if the Bible is made readable it will be read and so make religion a vital factor in modern life, all who hold that the King James version is inerrant and gives the literal language of the prophets and saints, all such will naturally oppose the introduction of any new translation.

Religion of all things can least afford to be tainted with antiquity. The greatest danger today is that our young people, more impatient with the past than any previous generation, shall look upon religion as something out of date with which they have no concern. If religion is too closely identified with Palestine it will be regarded as foreign to young Americans, except those whose home land is the Promised Land. The God of the churches is associated in the minds of modern youth with mummies and cuneiform inscriptions, rather than with the printing press and radio. There is some excuse for the good old Methodist lady who started in to learn Hebrew. When asked why, she re-

plied that she must die before many years, and she wanted to be able to talk to God in his own language when she got to heaven.

We must not allow religion to be buried under a heap of archeological rubbish like the cities of Mesopotamia and Egypt. The Lord is no antiquary. He is a God of the twentieth century, more at home, we believe, in our modern world than in any previous age, though we hope that the twenty-first will be still better fitted for His habitation.

It were blasphemous to suppose that the truths of religion would lose by translation into modern English. Many a man, however, has been condemned as heretic for expressing an old truth in a new form. I once heard a devout woman criticize her pastor as irreverent, and when I asked her how, she said: "He talks about Abraham, Isaac, and Jacob as though they were real persons."

What the world needs is the reincarnation of the Eternal Word in the living words of today.

References to Modern English Versions

If, as I hope, these remarks may have inclined some to see for themselves if religion will survive translation into our vernacular, it may be of interest to append the titles of such modern versions as I am familiar with. I have purposely quoted from various versions in preparing this volume in order that the reader may sample several. No one who did not know Italian would think of making a serious study of Dante without consulting all the different translations available, and it is quite as important to learn exactly what the biblical writers said about Inferno and Paradise.

The New Testament: An American Translation. By Edgar J. Goodspeed, Professor of Biblical and Patristic Greek in the University of Chicago, Chicago. The University of Chicago Press.

This is the latest and probably the best for American readers.

The Making of the English New Testament. By Egdar J. Goodspeed, Chicago: The University of Chicago Press.

This is not a translation but a book about translations, giving the reasons for a modern version.

The Twentieth Century New Testament. New York: Fleming H. Revell Co.

It was this book that converted me to modern versions. I have used it ever since it first appeared, twenty-five years ago, and I know how well it works on young and old, learned and unlearned. It is translated by a group of twenty British scholars of various denominations.

The Modern Bible. By the Rev. Frank Schell Ballentine. New York: The Lovell Co.

The first attempt at a modern version translation of the Bible, was the publication under this title of little volumes of the gospels in 1899 by an Episcopalian clergyman.

The Modern Speech New Testament. By R. F. Weymouth, Boston: The Pilgrim Press.

The Westminster Version of the Sacred Scriptures: The New Testament. Edited by the Rev. Cuthbert Lattey, Professor of Sacred Scriptures at St. Beuno's College, North Wales, and the Rev. Joseph Keating, Editor of *The Month.* New York: Longmans, Green and Co.

A new translation by a group of Jesuit scholars with the approval of the Cardinal Archbishop. The English is only partially modernized.

The Old Testament (Vol. I: Genesis to Esther; Vol. II: Job to Malachi) and *The New Testament.* By the Rev. James Moffatt, Professor of Church History, United Free Church College, Glasgow. New York: George H. Doran Co.

Here we have for the first time a complete and scholarly translation of the whole Bible into modern English. No one who believes that the Bible has a message for our times and wants to know, so far as can be found out, what

its authors meant should fail to consult it, even though he may prefer the familiar language of the old version.

The Psalms in Modern Speech. By John Edgar McFadyen, Professor of the Old Testament, United Free Church College, Glasgow. Boston: The Pilgrim Press.

The poetical form is maintained by rhythmical language and printing as verse.

The Beginnings of History According to the Jews. By Professor Charles P. Fagnani, of Union Theological Seminary. New York: Albert & Charles Boni.

An original and literal translation of the first eleven chapters of Genesis.

Professor J. M. P. Smith with several collaborators is preparing a modern English translation of the Old Testament that will soon be published by the University of Chicago Press.

WHEN WE WERE HEATHEN

(A Missionary Talk to Young People)

Five times I have been given one less than forty lashes by the Jews. I have been beaten three times by the Romans, I have been stoned once, I have been shipwrecked three times, a night and a day, I have been adrift at sea; with my frequent journeys, in danger from rivers, danger from robbers, danger from my own people, danger from the heathen, danger in the city, danger in the desert, danger at sea, danger from false brothers, through toil and hardship, through many a sleepless night, through hunger and thirst, often without food, and exposed to cold.—II Corinthians 11:24-27 (Goodspeed's version).

People often wonder what is the secret of the persistent opposition to foreign missions; why it is that so many otherwise good and intelligent persons object to sharing with our brothers in darkness the light that has been given to us, especially in consideration of the fact that religion, like knowledge, is something that is not diminished by dividing it but is multiplied. It is twice blessed; it blesseth him that gives and him that takes.

The fact is, the root of the opposition to foreign missions is chiefly natural selfishness. We have a good thing and we want to hold on to it. All men are by nature monopolists. A poor man suddenly become wealthy is likely to be as miserly as a born millionaire. If a man has a fine painting, or a woman has a beautiful dress, it is valued more highly if nobody else has one like it.

It appears that some people think that Christ was

born to our race; that he came first to the Nordics and afterwards to nobody. Actually of course we owe our Christianity to foreign missions in the days when we were the foreigners.

Our religious genealogy is this: Christ came as a foreign missionary to the Jews, the Jews came to the Romans, the Romans came to the English. The first of these missionary enterprises we read about in the Gospels; the second we read about in the Acts of the Apostles. The third we do not read about at all as a rule because it is not in the Bible. But that is a poor reason. The history of the Church after the end of Acts is also interesting and instructive. Let me tell you a story or two from this unread history.

About the year 586 there lived in Rome a young monk named Gregory. He had been born to high rank and great wealth, but had laid both aside to serve the church. It happened one day that Gregory visited the slave market of the city. I say "happened," but I do not think it was altogether by chance, for when he became pope he paid great attention to the evils of the slave trade, and I presume that it was more from some humanitarian motive than from mere idle curiosity that he attended the slave sale.

There he saw every kind of man that the broad empire of Rome could furnish; representatives of all the conquered races, from the Nile to the North Sea, mostly black, woolly-headed Africans and brown-skinned Asiatics with straight black hair. But among them there happened to be that day three captives of quite unusual racial type, with blue eyes, long flaxen hair hanging down their backs, and pink and white complexion, a

type of physiognomy that has, very curiously, been regarded even among brunette peoples as belonging to angels. Gregory was so attracted by the strange beauty of these youths that he inquired whether they were of Christian or of pagan people.

"Pagan," replied the Jewish slave dealer.

"Alas, that beings of such bright faces should be slaves of the Prince of Darkness! What is their race?"

"Angles," was the answer.

"They look like angels and should have a heavenly inheritance," said Gregory. "From what country do they come?"

"Deira."

"Deira. Right, for they shall be rescued *de ira* (from the wrath of God) and receive the mercy of Christ. How call you the king of that country?"

"Ælla."

"Then must Alleluia be sung in Ælla's land," said the priestly punster.

From that day Gregory became a missionary crank. In fact he was so fanatical that he started out himself a few days later with a few monks to convert Britain; but he was so much needed in Rome at the time that the people clamored for his recall, and the Pope sent horsemen after him. They caught up with him at the end of the third day's journey and found him resting under a tree, reading a book and making puns. It was his only vice.

For some twenty years thereafter he was kept busy at church work, but he never forgot his intention of converting the savages of that remote archipelago. In 596, after he became Pope, he sent word to Gaul that

part of the papal revenue should be spent in buying Anglo-Saxon slaves of seventeen or eighteen to be sent to Rome for education, that they might later be made missionaries to their native land. But without waiting for that he announced his intention of sending a band of monks to evangelize the English.

We have no record, so far as I know, of what advice his friends gave him when he proposed his unprecedented plan to them, but since human nature is much the same in all ages we can easily guess what objections were brought forward to dissuade him.

In the first place, that it was hard times. We should be justified in assuming this on general principles, for it has always been hard times, ever since Adam was evicted from the Garden of Eden, and the times are felt to be especially hard whenever a contribution for missions is called for. But we do not have to guess about it, for we have sufficient knowledge of the state of affairs to feel safe in saying that it was just about as hard times then and there as it has been anywhere and any time in the history of the world. A commercial crisis, a political crisis, and a religious crisis were in conjunction at that time in the city of Rome. Half the people were paupers, supported by public funds. The old families had been living on the interest of their debts for many years, and now many of them were being kept alive by the alms of the church. Gregory himself gave food to three thousand poor girls and their parents every day. The Campagna around Rome, once so fruitful, was now a desert. Crops had failed, malaria had depopulated the land, and the farms had become cattle ranges. The Lombards from the north of Italy were

threatening to overwhelm Rome at any time and could only be kept off by a combination of force and diplomacy, arms and bribes. Plagues and floods were causing horrible devastation. All the money that could be raised was needed right here in Rome.

Gregory himself thus paints the situation in one of his sermons:

> Everywhere we see tribulation, everywhere we hear lamentation. The cities are destroyed, the castles torn down, the fields laid waste, the land made desolate. Villages are empty, few inhabitants remain in the cities, and even these poor remnants of humanity are daily being reduced.

Another argument was that there was work enough to do at home. And indeed there was. A great many of the Italians even among the churchmen needed converting as much as any heathen. There was a schism in the church, an old heresy and several new ones. John, Patriarch of Constantinople, was setting himself to be Pope. It was doubtless pointed out to Gregory that he was already undertaking more than a dozen men could do. He was teaching agriculture to the settlers that he had put on the abandoned farms. He was trying to reconcile the Arian heresy. He was acting as arbitrator in the quarrels of the Lombards. He was reforming the church music—introducing the Gregorian chants, you know—and nothing takes more time, needs more tact, and makes more trouble than managing a church choir. He was having a hard fight within the church to prevent the taking of bribes for ecclesiastical preferment. He was trying to abolish the slave trade, an

established institution of society for ten thousand years or more, and not yet eliminated from the world. And here he was proposing to undertake missions in the foreign field. No wonder folks thought him foolish. It is a well known fact that those who go in for foreign missions never do anything for the home church. I should say, rather, it is well known but not for that reason to be taken for fact. Whether it is a fact or not you can find out for yourself by observation in your own church.

But probably the most powerful argument that was brought against the new enterprise was that the British were savages and incapable of Christianity. Doubtless their own religion, crude as it might seem, was better suited to their barbarous natures and primitive stage of culture than the more refined and spiritual Christianity. These tribes had never shown any susceptibility to civilization, and never had made a contribution to the arts, literature, or science of the world. Probably they were congenitally incapable of it. They were destined to perish from the earth anyway before the advance of civilization and it would be mercy to leave them in peace.

It is almost impossible to realize the feeling of the Greeks and Romans for outside barbarians. We cannot nowadays in the light of history regard any people as so hopeless as our ancestors seemed to the Romans. Those far-off, foggy Tin Islands were in truth inhabited by races about on a par with the American Indians, lower than most of the races to which we now send missionaries. Some of them were painted blue with woad. Their religion consisted in part of burning people alive

in wicker cages, and in part of shocking rites under the mistletoe of which we preserve the mere symbol. Even the Anglo-Saxons, worshipers of Tiw, Woden, Thor, and Friia, whom we commemorate in the name of four days in the week Tiwsday, Wodensday, Thorsday, and Friiasday had no higher idea of heaven than a place where fighting could go on all day, and at night the heroes, dead and alive, could all get drunk together. Evidently Christianity could not do anything for such folks. It would be wasted on them.

But, as I said, Gregory was a missionary crank and none of these perfectly good arguments made any impression on him. He sent off a party of monks under Augustine to evangelize the British Isles. They got as far as France when they heard such awful reports of the savages that they were sent out to convert that they turned back in despair. You can hear rather unfavorable things said even yet about the British from that side of the Channel but in this case they were not exaggerated. Augustine went back to Rome to beg off, but Gregory persisted, and his forty monks, as Gibbon said, conquered England more completely than Cæsar's six legions.

One by one and in various ways the seven kingdoms of the Anglo-Saxon heptarchy became Christianized, and it was A.D. 601 before Gregory's primary objective, Deira, or Northumbria, was reached. King Ælla had been dead for thirteen years and in his place reigned Edwin, his son, Edwin of Edwin's burgh, now called Edinburgh. I have from childhood had a peculiar fondness for King Edwin, perhaps because of his name, and it has always seemed to me that he took the wisest con-

ceivable course under the circumstances. When Paulinus, the missionary, appeared at his court he neither resented the intrusion nor accepted the new religion uncritically. He did not murder the missionaries nor demand miracles of them. He summoned a witenagemot, or council, and consulted the wisest of his kingdom as to whether they should accept Christianity or cling to the faith of their fathers. After some discussion Coifi, the high priest of the established religion, arose and declared that the old gods were no good at all. He had been a faithful and devout follower of them all his life and it had not been of any benefit. The old religion was mostly fraud, as none knew better than he, its priest, and the new religion must be better since it could not well be worse.

Then an old warrior rose, and said with savage eloquence that the life of man seemed to him like a bird that flew out of the darkness into the king's banquet hall and, after circling around in bewilderment at the light and noise of revelry, flew out of the opposite window into the night again. "Now," he said, "if these strangers can tell us anything of the unknown whence we come or whither we go, or how to act for the little while that we are in the light, by all means let them come and teach us." So the missionaries came and taught, and that is how we became Christians.

Now the situation is reversed. The despised savages of the Tin Islands and their Nordic neighbors have become the dominant race of the world and the leaders of civilization. The Anglo-Saxon people occupy or control more than a quarter of the habitable area of the earth. We are increasing in numbers, wealth, and

power. We cannot say how long this unprecedented prosperity will last, but we cannot assume that it will last forever. Rotation in leadership seems to be the rule of human history. Nations appear to have their periods of youth, maturity, and old age, like individuals.

> There is the moral of all human tales,
> 'Tis but the same rehearsal of the past;
> First freedom, and then glory—when that fails,
> Wealth, vice, corruption, barbarism at last,
> And history with all her volumes vast
> Hath but one page.

We do not know the reason why peoples or persons decline and die. Perhaps there is no reason why. Perhaps they might live and flourish forever—but they never do. Professor Flinders Petrie [1] of London University counts eight successive cycles of civilization, all approximately the same length and, applying the same measure to the present, looks for its collapse in about three hundred years. Oswald Spengler of Germany [2] using a different system of calculation, arrives at the same date, 2200, for the definite decline of civilization in Europe, which will finally be flooded by foreign and fresher races. A nation is never really overthrown by outsiders. It falls like a forest tree from dry rot in the trunk. Even when a nation has not yet reached its height certain signs of senility may be detected in it, just as a man in the full prime of life and vigor may sometimes perceive the first symptoms of the diseases which he knows from his family history are most likely

[1] *Revolutions of Civilization.*
[2] *Der Untergang des Abendlandes.*

to cause his death. Professor Petrie enumerates as indications of approaching national decline the accumulation of wealth, the slackening of effort, the growth of democracy, the demand of the majority for the division of wealth, the overthrow of oligarchy, decrease in production, and lapse into barbarism. Others have suggested such symptoms as the following: increase in suicides as showing failing courage or lack of love for life; increase in the proportion of insane and feeble-minded and in the prevalence of neurasthenia; decrease in the birth rate, especially of the better stocks; increase in homicide and crimes of violence; decline in individual initiative and increasing dependence upon government; extravagance in luxury; excessive devotion to athletic spectacles; failure of family life; decline of religion as a vital factor in individual life (though there may be an increase in ecclesiastical power and pomp); recrudescence of superstition; lack of coördination and disregard for law.

These are some of the common, characteristic developments that have been observed in periods of national decline, but which of them are significant symptoms, and whether they are real causes or accidental accompaniments of senescence, has not yet been ascertained. The diagnosis of disease in a nation is more difficult than in an individual. Racial therapeutics is an unknown science. Personally, I have as little confidence in the predictions of the date of the death of our civilization by Petrie and Spengler as I have in the prophecies of the date of the end of the world deduced from Daniel and Revelations. No man knows when or how his end will come, and no nation knows either. But

both may expect that it will come somehow and sometime, and both should make preparations accordingly.

Now in every shift of supremacy from one race to another there is always a great loss in the higher achievements of civilization. Sometimes there is a complete relapse into barbarism for centuries and great cities become deserted ruins. The Sumerian, Hittite, and Minoan civilizations had been completely forgotten until recently unearthed by the archeologist. After Rome ceased to be productive there were more than a thousand years when almost nothing of importance was contributed to science, art, or literature, and much that had been known was forgotten and had to be rediscovered. If it had not been for the missionary efforts of such men as Paul, Gregory, Augustine and Pauline, Christianity would have been lost in the wreck of Rome, as was Latin learning and literature.

We cannot know, any more than did the Romans, what people will be our successors in the age to come. They may be yellow, brown, or black. They may be some inconspicuous branch of the white race, or more likely some hybrid that has not yet arisen. We can only do the best we can by sharing with other peoples the best we know, by teaching them what we have found out about the laws of nature and about the laws of God. Our religion was the best thing we inherited from ancient Rome. It is the best thing we have to give to others. We can be certain to Christianize our successors if we Christianize the world. We have simply to follow the Golden Rule. Do unto others as others have done unto us. "Freely ye have received, freely give."

LEST WE FORGET

(A Fourth of July Sermon)

The lines are fallen unto me in pleasant places; yea, I have a goodly heritage.—Psalm 16:6.

We celebrate Independence Day for the same reason that we tie a knot in our handkerchief or slip a rubber band on our finger. It is to remind us to remember not to forget something. And the thing that we are so likely to forget that we have to set aside a special day to remember it in, is the biggest thing that belongs to us—our country. Every Fourth of July address is, or should be, a sermon, the eighth chapter of Deuteronomy with its haunting refrain "lest we forget," which Kipling put into verse in the "Recessional."

On July 4th every year of the first hundred of our national existence the eagle used to scream. Then followed the era when the shadow of the muck-rake fell over the land and the eagle sobbed and whined for his sins, which were not few. But the last few years have shown us that if this country is not nearer heaven than Europe it is at any rate farther from hell, so the eagle has plucked up courage and is screaming again.

This is not the time to rehearse the crimes of George III. Americans have less desire than ever before to rail at their British cousins. But we can celebrate the Fourth of July without being accused of narrow pa-

triotism, for Independence Day is more than a national holiday.

The document to which John Hancock and others appended their signatures on that hot July day in 1776 was not merely the Declaration of the Independence of the United States. It was also the charter of political freedom and the right of self-government to the commonwealths of Australia and New Zealand, to the Dominion of Canada, to the colony of Newfoundland, and to the Union of South Africa.

The Declaration of Independence gave us our start in life, a New England farm and a southern plantation. The rest we have got for ourselves. Not a quarter of the United States as it exists today was ever under the British flag. Our histories have been written too exclusively on the Atlantic Coast. History, like the Constitution, should follow the flag.

We are inclined to think that the hand of God in history is shown only in that of the Jewish nation, that no other people has been so signally prospered as a reward for following the laws of God or so patently punished for disobedience to them. Really, however, if we stop to consider it we find that the history of Israel is the history of every nation. If it were otherwise it would have no value for us as an object lesson. The Jews were not a sacred people, they were not a divinely inspired nation, but they had divinely inspired historians. Through Moses and the prophets there was a succession of men endowed with marvelous power to discern cause and effect, to show what were the sins which had brought ruin upon the people and what were the moral conditions of national prosperity.

It is this historical insight which gives the biblical records their unique value, and that is why we can refer to them for help in the interpretation of our own history.

That the Jews inherited the Promised Land was not chance; it was not due to irrational favoritism of God acting like a partial father who in his will disinherits one son and gives all his property to another. It was because the Jews deserved this fair and fruitful land that they got it. It was because they were morally stronger than the vile and idolatrous Canaanites that they were able to conquer them in war and enter into the possession of cities which they did not build and orchards which they had not planted. This is proved by the fact that when the Israelites lost their moral superiority over surrounding nations they were overcome by them and carried into captivity. War is a rough arbiter, rude and cruel, but its decisions are rarely unjust. It is a test from time to time to prove which people are fitted to survive and to possess the world.

The government of God is like that of a wise landlord who owns many farms of different value. When he sees a neglected farm he removes the tenant and puts in his place one who has been getting larger crops and keeping his farm in good condition. So a country is given to that people which can make the best use of it, and only so long as it is doing better than other nations can it hold possession. There is not enough land in the world for any of it to remain idle or in incompetent hands. A nation is allowed to govern itself only so long as it can govern itself well. When it ceases to do

that the government is put into the more competent hands of some other nation.

We are not the original owners of this beautiful country. Nobody knows how many former tenants there have been. We know that there was the Indian—various tribes of different degrees of savagery, whose only idea of usefulness was to kill the deer and the buffalo and fight each other. There was the Spaniard, who searched the country over for gold but cared nothing for the more valuable coal and iron. He was not a suitable tenant. There was the Frenchman hunting for furs or seeking to establish in the wild West a feudal vassalage for Louis XIV. Still the land was vacant.

Finally came our own race and took possession not by accident, not by fate, not by favoritism, but because we more than other nations were fitted to cultivate it. Because in our hands it could be made more useful to humanity than in the hands of the Indian, the Spaniard, or the Frenchman. Because we can draw the waters of the mountain brook around our fields and make the desert fruitful. Because we can dig out the coal and iron and from them make the thousands of articles needed by the people in other lands. Because we can offer to the men who came to us from other nations freedom, justice, work, and wages.

It is for these reasons that the Lord our God has given us this land; this land of fountains and depths that spring out of the valleys and hills; a land wherein we shall eat bread without scarceness; a land whose stones are iron, and out of whose hills we may dig coal and copper.

But let us beware "lest we forget" on what conditions we hold this fair land. It was not given to us, it was leased. It was not deeded in fee simple to us, our heirs and assigns forever; we have merely the usufruct of it. It is not leased to us in perpetuity, not even for ninety-nine years, not for any definite period of time, however short. Our tenure is dependent on our complying with the conditions. These conditions are simply obedience to the laws of God. Every deed to man or nation contains this clause expressed or understood, and without it every conveyance is null and void. The Ten Commandments were given to us as to the Jews with this inducement, "that thy days may be prolonged and it may go well with thee in the land the Lord thy God giveth thee." And we have warning by precept and example that action for dispossession follows immediately on our failure to keep the conditions; "as the nations which the Lord destroyeth before your face so shall ye perish because ye would not be obedient unto the voice of the Lord your God."

Since our lives and our country, our prosperity and happiness, depend on our obedience to God's commands, it is important to study with the greatest care this clause in our contract. How then can we know God's will? Where can we find God's laws? Nowhere in a condensed and easily accessible form. Everywhere if we look for them. The laws of God are not codified and we cannot purchase a single volume of "Revised Statutes" containing all of them. They are written in our minds and bodies; they are embodied in the materials with which we work and in the food we eat; they are expressed in the words of great and good men;

they are contained in all history properly written. Some of them are in the Bible, a very small part of them, but including the most important. Even those laws of God revealed in the Bible are not so clear as we should like them to be. They are written in Hebrew and Greek. I do not refer to the language merely. We can translate that, but the ideas, the symbols, and the mode of thought are ancient and foreign. We have to employ ministers to study them and explain them to us week after week. Other laws of God, especially those which govern his material world, are being studied, arranged, and codified by scientists who devote their lives to this work. God's laws dealing with the political and social relations of men are studied by legislators and jurists and are embodied, more or less imperfectly, in our statute books. Legislators do not *invent* good laws; they formulate them in accordance with the facts, just as scientists do. If they do formulate a false law and pass it, it is null and void by decision of the Supreme Judge of the Universe, and all the powers of the government, state or national, cannot enforce it. The more they try to enforce a wrong law, the more mischief it makes.

Through the labors of theologians, scientists, and jurists, and all others who try to find and tell the truth, we have found out many of God's laws and can see to some extent why it is that rewards follow their fulfillment and punishment their violation. We see that this is not by the arbitrary act of a capricious despot but is the direct action of cause and effect, and we recognize its justice whenever we understand it. God has linked together, in this world, righteousness and pros-

perity, wrongdoing and misfortune, and what God has joined together no man may put asunder. When a man has health it is a sign that he is obeying God's laws of hygiene. When a nation is growing in population and wealth we may assume that it is obeying God's laws of political economy. It is the only certain test.

When a chemist discovers a new compound and wishes to know if it is of value as a medicine he takes it himself—in small doses. So when some new political remedy is proposed as a cure for some or all of our social ills, we should not turn a deaf ear to its enthusiastic and often overzealous advocates; neither should we adopt it blindly as a cure-all. We should simply try it—in small doses—and carefully watch the effect.

It might be objected—in fact the devil brought forward this suggestion several thousand years ago—that sometimes the wicked prosper and it is the righteous who suffer. This is obviously true. We all of us think that this is the case whenever we suffer. As the rain falleth alike on the just and the unjust, so the cyclone deals out death to the good and the bad. We have seen the wicked flourish and the innocent afflicted. But we all realize that the prosperity of evil is temporary and rare, that a lie cannot long endure, and that the truth is mighty and shall prevail. Wickedness does not pay; that is the great lesson of life. Happy are those who learn it from precept instead of experience.

We talk about the desirability of getting God on our side in any conflict or cause. We sometimes try to get God to espouse our cause by bribes or petitions. We try to get some good man who might be supposed to have a "pull" with the Almighty to exert his influ-

ence in our behalf. Now there is only one way of getting God on our side, and that is to get on God's side. We can always be sure of being on the winning side if we find out which side is right and join that. The only way to get God's favor is to do his will. He recognizes no professed adherents—only followers. His rewards are not misplaced.

If we as a nation have enjoyed to an exceptional degree the favor of God, it cannot be that it was altogether undeserved. It is our virtues, not our vices, which have brought us this remarkable prosperity and we therefore have a right to take pride in it. In fact, it is the only thing we have the right to take pride in; anything else is vanity and conceit. A nation becomes formidable through its virtues and dangerous through its vices.

Our history properly written would show the hand of Providence guiding and controlling a nation as clearly as the biblical histories. It should be written, as they were, from the standpoint of God rather than that of man. It should be written as a general on the hilltop writes the history of a battle, not as it was seen by a private in the ranks. So written, our history would be found not less remarkable and instructive than the history of the Jews in the Bible. It would tell of the flight of our ancestors, Catholic and Protestant, from persecution and oppression as the followers of Moses fled from Egypt. It would tell of the wandering of our race in deserts far wider than Sinai, of battles with barbarous inhabitants of the land and their overthrow. It would narrate the curious chain of events, of court intrigues and corrupt statesmanship, by which

the western part of this country fell into the hands of the only man in Europe who would have sold it, and at a time when he had to have money. We have built greater cities than Jerusalem and grander temples than Solomon's. We have blown down stronger walls than those of Jericho, and have crossed dry-shod wider rivers than Jordan.

One way of valuing anything is by knowing its price. We begin to appreciate the value of this heritage of ours when we study history and learn what it has cost. When we think of the thousands who have given their lives to free our country and to preserve it intact, when we think of the millions who have labored, each at his own task, great or small, to make our country what it is, then we know what our heritage is worth. We are the heirs of all the ages. Our civilization, our language, our science, our ideas of right and justice, our religion, we have inherited and we must see to it that we guard well what has been entrusted to us. Our country and our civilization are not ours alone; they must be passed on to our posterity undiminished and unimpaired. We are simply the trustees of this estate and must not squander it for our personal pleasure. We must preserve it by righteousness and wisdom. I put them together because they are really the same thing. We hear actions called righteous which are not wise, and deeds called wise which are not right, but it is a mistake, an impossibility. It is wise only to do right.

We must not live in selfish enjoyment of our heritage, thinking it will last our time, saying as the reckless king, "After us the deluge." We must leave no small evil to grow, no sores in the body politic to fester

into dangerous wounds. We know what our forefathers the founders of the Republic thought about slavery. It was bad, they realized, but it was a little thing, a tumor which it would hurt to cut out. The nation was weak and any decisive action would have alienated some of the states. Perhaps slavery would die out; anyway, it would not grow. But it did grow, and it required one of the bloodiest wars of modern history to cut this tumor from the breast of the nation. Let us beware lest we make the same mistake, leaving some other social injustice to grow and inflame until riot or war is the only remedy.

Nations are always conquered from the inside. So long as we are morally strong we shall be strong in every other way. Our only dangerous foes are within the country, not without. Those who perpetrate injustice, those who appeal to violence, those who stir up class hatred are the men whom we as a nation have to dread and against whom we have to protect ourselves. Liberty and independence, law and order, are not preserved by written constitutions and statutes; not by police and armies; not by wealth and success, but by the morality of the people. The government and institutions of a country cannot rise much higher than the general ethical level. We cannot expect a government to be honest while the people are dishonest. The management of public finances will not be honest so long as the people dodge taxes. Legislators will not take care of public money as though it were their own so long as the people do not treat public property as they would their own. Soldiers will loot and destroy if the people lynch. Railroads will charge unfair rates so

long as passengers will use tickets over again if the conductor fails to collect them. It is personal wickedness which makes our laws and institutions work so badly, and we are quite safe in thinking that no other sociological contrivances, however cunningly devised, will work much better until the foundation of all society, which is the average morality, is raised.

Whether, then, we as a people shall prosper or go bankrupt depends simply on whether each one of us is worth his wages. Are you giving to society an amount of service equivalent to what you spend on yourself? Are you working your way, or are you sponging on the rest? Each man, as he receives his three dollars, his five dollars, or ten dollars for his day's work, ought to consider what he has done that day for other people which entitles him to that amount of money. If a carpenter, has he made something that day worth so much more than the lumber? If a lawyer, has he to that extent helped to obtain justice and insure fair dealing? If a merchant, has he been of so much service to society in the distribution of goods? If not, then of course he has cheated his neighbors, and cannot call himself an honest man, no matter how willingly the money was paid to him. This is elementary morality. The ideal Christian standard is higher yet. This requires not only that you give as much service to society as is expected of you for the wages you receive, but also that you do all that you possibly can. The common plan is to work as few hours as possible and to get as much for it as you can. Trusts and trade unions are organized with that aim, and strikes and lockouts are for that purpose. This, of course, is precisely the op-

posite of the Christian plan, which is to do as much for others as you can and take as little as possible for yourself.

Our duty as tenants of this domain is primarily to develop it. It was let to us unfinished and unfurnished, only partially fit for human habitation. The days of creation are not ended. In various places the igneous formations are still being made, the rough forge work which was finished in most of the world hundreds of thousands of years ago. Everywhere we see something left for us to do. To complete the work of creation is our religious duty as much as anything else.

In that ancient religion which is nearest akin to the Jewish, and from which we Christians have borrowed much, this idea is clearly expressed. To dig an irrigation ditch is better than saying many prayers; to kill a wolf is as good as to sing a hymn. So spake Zarathustra. And thus saith the Lord of Hosts by the mouth of his prophet Jeremiah: "Build ye houses and dwell in them, and plant gardens, and eat the fruit of them." The evolutionist who creates a new crop is a true disciple of the Creator.

It may be said that this gospel of work does not need preaching at the present time and in this country. It may not need to be taught, but it does need to be preached. But what we do need to have called to our attention is the religious aspect of such service; thankfulness for our opportunities for such work, a realization of our duty to do it, and a sense of our responsibility for doing it well, lest we forget.

We Americans do not believe that people should be pressed into the same mold, machined to the same

pattern. It was to escape such a process that many of us or our ancestors came to America.

America was populated by the persecuted. Puritans from England, Huguenots from France, Germans from the Rhine, Catholics from Ireland, Czecho-Slovaks from Austria-Hungary, Armenians from Turkey, Jews from Russia. These are but a few of those who fled to America for freedom from the religious, economic, racial, or military oppression at home. All these were protestants and nonconformists in the original sense of these words, whether they were Catholics or Congregationalists. They were a chosen people—chosen to be kicked out from their native lands. Whether our fathers came over in the *Mayflower* along with a shipload of furniture and pewter ware or whether they came over later in the more comfortable accommodations of a steamer steerage, it was mostly because they were considered undesirable citizens that they were forced or permitted to depart.

America is a chosen land—selected out of all parts of the world as their future home by those who desired or were obliged to leave their native homes. This is an honor that we should appreciate and endeavor to serve. The United States is a synthetic nation. Other countries "just growed," like Topsy. Ours is the conscious and considered creation of its people. European and Asiatic countries are almost entirely populated by those who were born there and did not have energy enough to get away. Our population is largely composed of those who were not born here and had energy enough to come. What is called patriotism is sometimes not love of country but mere laziness. Our patriotism is less

alloyed with this element than any other, for a large proportion of Americans love America because they have lived elsewhere. They came here because they thought they would find it best; they stay here because they have found it best. Americanism is an elective course.

Our form of government is no hand-me-down from a former generation, no misfit borrowed from another land. It is made to measure and remade to fit. Our social system is more of a skin than a coat. It grows with us. Every man his own tailor is the law of democracy. The king of France said, "I am the State." It was a lie and they cut off his head for it. The American citizen says "I am the State," and it is the literal truth. All men are monarchs. This develops a sense of responsibility. In other lands the people can complain, "Why don't *they* do it?" In America we can only wonder, "Why don't we do it?"

Consequently the first lesson to be taught to an immigrant is that patriotism in the American sense is a different thing from Old World patriotism. Americanism does not mean loyalty to a king; it does not mean attachment to a particular spot of ground; it does not mean conformity to a fixed code of customs; it does not mean the perpetuation of traditional institutions; it does not mean the aversion to novel and foreign ideas; it does not mean hostility toward those who differ from us.

Americanism is one of the fine arts, the finest of all the fine arts, the art of getting along peaceably with all sorts and conditions of men. We Americans have had more experience with the practice of this art than

other nations, and it is not undue boasting to say that we have acquired a certain proficiency in it. A steel mill may contain twenty different nationalities, and they do not quarrel any more than so many Irishmen or Poles in their native land. A city block is a map of Europe in miniature. The immigrants try to keep up their traditional antipathies, but there are few Old World feuds that, if let alone, can resist the solvent atmosphere of America. Their children when they go to school call each other names and stretch their little necks trying to look down on one another. And when they grow up they go into partnership or intermarry. So, scrapping and bargaining, quarreling and flirting, studying together and working together, they learn to know each other and become good Americans together.

No nation was ever before put to such a strain as ours in the Great War, for none ever contained so many representatives of the belligerent nationalities; yet none proved more stable and strong. Our national motto was not true when it was adopted, but it is now. At last the American people, regardless of racial diversity, can say with sincerity: United we stand.

THE NINE SONS OF SATAN

(Not a Sermon but a Fable)

Now in the days before Adam, when Satan was alone on the earth, Allah made a helpmeet for him out of the smokeless flame. And Awwa was the name of Satan's wife and she bore him nine sons, not born after the manner of men, but hatched like serpents of leathern eggs in the sands of the desert where the sun stands overhead at noon. And it came to pass when men began to multiply on the face of the earth, and daughters were born to them, that the sons of Satan saw the daughters of men that they were fair and they took them wives of all which they chose. And their children were called jinns and they increased and multiplied exceedingly, and spread abroad over all the earth and to the islands of the sea and into the land which is beyond the great waters. And every land wherein they went, there they abide to this day. But men know not the sons of Satan save by their works; for they are fashioned after the likeness of man, and appear as angels of light.

In the days when the earth was young the sons of Satan had little to do, for all mankind dwelt together in one place, tilling the soil or tending the flocks. And their sins were like themselves, few and simple. But after their tongues were confounded, and they were scattered abroad according to their nations, they

sought out many inventions. Then had the generations of jinns to change their ways and adopt the new inventions and divide their labors among themselves, each according to his ability.

FIRST SON

The Arabian authors, to whose surprisingly wide knowledge I am indebted for most of the above, have even recorded for us the names of the nine sons of Satan and their respective functions. The oldest of them, or if not the oldest, one of the first to get busy, was Haffan, whom the Greeks call Dionysos, and the Latins Bacchus, and the Prohibitionists the Demon Rum. Noah planted a vineyard soon after all the world had gone wet, and quite innocently took to grape juice as a beverage. But Haffan, with the aid of some millions of microscopic jinns, known nowadays as saccharomyces cerevisiæ, introduced into it a subtle poison which brought disgrace upon Noah as it has upon so many of his descendants.

But Haffan's power for evil was limited in ancient times, because, try as he would, he never could bring the alcoholic content of wine, beer, and cider above five or ten per cent. Here the fermentation stopped, for the little devils in the drink died of the poison they had brewed. The drink was then strong enough to make men foolish and slothful and loose-lipped, but these effects soon wore off and rarely carried his victim on to those mad deeds which alone could satisfy Haffan's diabolical ambitions. Not until the twelfth century after Christ were means discovered by which he

could turn out a product capable of matching in wickedness anything his brothers could do. It is, as we might expect, an Arabian chemist, Abdulcasim, who is discredited with the invention of distillation by which brandy, whisky, and liquors of any desired strength can be manufactured. He put his product on the market under the trade name of the Elixir of Life, or *eau de vie*. But it turned out to be something quite the opposite. Such tricks as these gave to chemistry the name of the Black Art and brought the science under a cloud of suspicion from which it has but recently and not yet altogether emerged. It was long the popular belief that chemists were inspired of the devil or were the sons of Satan in disguise, and indeed the certification of such suspicion may be found in the records of many courts where chemists were found guilty, either by the testimony of experts or by their own confession under torture, of having sold themselves to the Evil One in exchange for their skill.

SECOND SON

Chemistry has also been the chief aid of another of the sons of Satan, Lakis, the Fire Fiend. He seems to have inherited his mother's ardent disposition, but his power also was at first limited and

> He grieved he bin
> Too small to sin
> To the hight of his desire.

The most he could do in antiquity was to burn a hut by upsetting an oil lamp or wipe out a village with a

forest fire. So he spent most of his time haunting the bitumen lakes of Baku, where the priests of Zarathustra kept the Eternal Flame alight. His brethren, Awan and Zulbaysun, who lived in the city and did a thriving business in court and counting-house, used to come and sit on the crest of the Caucasus, with their legs dangling over the precipice, and make fun of him for wading around knee-deep in the asphalt. Then Lakis, mightily vexed, stuck his pitchfork down deep through the crust of the lake and cast the pitch far up the mountain-side so that it bespattered their fine raiment, while out of the hole there rose a dreadful black smoke and stench as though it came from the depth of Tophet. Then as Awan and Zulbaysun flew away down the Euphrates valley toward Bagdad, he shouted after them and said: "Smell that, O my brothers, and know that the time shall come when men shall leave your cities and seek the waste places of the earth where this, my treasure, is found. And when one shall strike the rock there shall gush forth a fountain of oil without measure, and then will your merchant princes, O Zulbaysun, be as beggars before him, and your kings, O Awan, become as his hirelings. For in those days shall chariots of fire run about the streets and with the tenth part of an ephah of fined oil shall they outrun the swiftest horse of Arabia and kill many people. And men shall go under the sea in the belly of a leviathan wrought of iron for the greater peril of those who go down to the sea in ships, and make themselves rocs on whose wings they may fly like the jinns over mountain and sea." And after many days it came to pass even as he had said.

But Lakis in the meantime, while waiting for the fulfillment of his prophecy, was not idle, but kept his agents experimenting in many lands. In the kingdom of Sin, which is in Far Cathay, dwelt a man who, inspired of Lakis, burned willows and made charcoal and went into the desert and scraped up saltpeter and into the mountains and dug brimstone. All these he got and brayed them together in a mortar and gave of the mixture to his countrymen for a weapon of offense. But the Sinae were a peaceful and a foolish folk and they only made firecrackers out of the powder for merriment at weddings and funerals.

But Lakis had better luck when he got the ear of a monk in the West, Roger Bacon by name, a notorious wizard. For then men began to make guns bigger and bigger every year until they got up to forty-two centimeters. And Lakis showed them how to dip *qutun,* as the Arabs call it, or as we say "cotton," into Strong Water and to dissolve it in the *al kohol,* invented by Haffan, and with this to load the guns. Then would flames and thunder burst forth like afreets from a bottle, and ten miles away a hundred soldiers would fall down dead by this magic.

And much other mischief did Lakis do. The invention of matches was ascribed to him, as their original name of "lucifers" showed. This put into the hands of every evil-minded man or silly child the power to set fire to a home or perhaps to burn a city. The number of Fire Worshipers increased in the latter days until one saw in the streets almost every man and many of the boys carrying in their mouths a lighted weed giving forth the incense most pleasing to the nostrils of Lakis.

So in the course of time Lakis, whom the Northmen called "Loki" and the Latins "Lux," came to be esteemed the greatest instead of the least of all the sons of Satan. No magic was more powerful than his, and when one would prove his devilish origin, like Mephistopheles in the ratskeller, he would draw forth fire by scratching the table, a miracle which nowadays anybody can perform, so well has Lakis taught his lesson to the world.

THIRD SON

Now I would not have you suppose from the incident mentioned above that the sons of Satan were always quarreling. On the contrary, they were kept so busy that their idle hands found little mischief to do, except, of course, in their professional capacity. Save for an occasional squabble over which should be greatest in the kingdom of Iblis they got on together better than most human brethren and threw a good deal of business in each other's way. For instance, Lakis would never have prospered as maker of munitions if it had not been for his brother Awan, who was Councilor of Kings. He had his minions in every ministry and practically controlled the diplomatic service of the world. In that way he was able to stir up wars and rumors of wars at any time and keep national jealousy and race hatreds always aflame. In the old days men only went to war once a year or so, and not all of them then, and they took care to get back in time for harvest, or, at any rate, before the cold weather set in. But in the course of centuries Awan got things in such a fix that

wars lasted all the year round, and even in time of so-called peace a large part of the young men were serving in the army and others spent all of their days in the shops of Lakis making arms and ammunition. And acting on the advice of Awan the kings invested money in each other's gun shops, so it often happened that when they went to war they found themselves confronted with weapons made by their own people and were attacked by warships from their own yards. For the sons of Satan are no respecters of persons and quite devoid of race prejudice.

Finally it occurred to some people that if they could get rid of kings they would get rid of the evil council of Awan. But that did not help matters much. Though they put four and twenty barons to rule over the king and four hundred and twenty commons to rule over the barons, and forty-two million voters to rule over the commons, Awan's influence grew none the less. He always seemed to be able to get hold of the man higher up, however low down he might be.

FOURTH SON

In thus perverting the opinions of the people Awan's chief aid was his younger brother, Masbut the Tattler. Like the rest of the family, Masbut began business in a small way, using as his agents chiefly women and barbers. This was voluntary and unpaid labor, amateurish at best, although it is astonishing how active and diligent some of them were in the spreading of news, especially of a discreditable nature, and how much harm could be accomplished in a community by such

amateur efforts. "He that increaseth knowledge increaseth sorrow," especially when it isn't so.

It was not until the invention of printing that Masbut really got his start and scandalmongery was put upon a professional basis. Like Lakis, he tried to launch his discovery in China, but a country without an alphabet is no place for the printing business. But when Gutenberg once got it going in Germany it became one of the most efficient means of extending the kingdom of the Father of Lies. Books were too slow, the presses took to turning out quarterlies, then monthlies, weeklies, dailies, and hourlies, and those that came out oftenest served the purpose of Masbut best.

The mails were too slow for him, so he borrowed the lightning of Lakis and spread the news by copper wires and ether waves. When a lie travels at the rate of 186,000 miles a second it is hard for the truth to catch up with it. It is strange to think that once this important business of news-spreading was left to the casual calls of housewives or chance meetings on the Agora, the Rialto, or the corner grocery, when we now see its ramifications covering the world as with a net. Every day forests are cut down and ground up to be stamped with black words. Schools are established to educate young men in the art of gathering news and dishing it up to suit the popular taste. This gives Masbut his chance, for with every truth he mingles some falsehood so cunningly that even those who are trained to handle the news cannot disentangle it. In fact, we may be sure that no considerable piece of wickedness is put through without the aid of Masbut, the Printer's Devil.

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FIFTH SON

It is he who transmits the misleading messages of Awan the Diplomatist and publishes them in books named from the colors of the rainbow. He is also the right-hand man of Zulbaysun, who makes mischief in bazaars and turns the river of gold to his own purposes. 'Twas Zulbaysun who blew the South Sea bubble and many a bigger since. He robs widows and orphans of their inheritance and brings the honest merchant to ruin. In the old days he confined himself to such picayune business as clipping coins and tampering with weights and measures. But our complex interdigitation of credit gives him an opportunity for operations on a large scale and in secrecy. So active is he that there are many people who consider him responsible for all the deviltry in the world. Capitalism, they call him, with strong accent on the second syllable, and they believe that if he were banished the earth would be a utopia, forgetting that there are eight other devils as wicked as he.

SIXTH SON

Dasim, the sixth of the sons of Satan, is a domestic devil. The hearthstone was his primary place of business, and the substitution of the steam radiator has by no means decreased his opportunities. He instigates the sharp retort; he directs the poisoned arrow at the weakest joints in the armor of self-esteem as they have been disclosed in the intimacy of family life. He lights the flame of illicit love and fires the train of

jealousy that leads to crime. In his sphere of influence the progress of invention has made less change than it has with his brothers, for he works on the primitive emotions, the desires and appetites that remain the same through all the ages in spite of changes in custom. The laws of sociological geometry are eternal and the triangle has three sides in every land. A writ in Reno may take the place of a bag in the Bosporus, but the principle remains the same. Dasim has always given special attention to the dinner table, the center of domestic disunion. It is he who cools the coffee and overdoes the steak, in order to make them subjects of breakfast controversy. A person into whom he has entered is euphemistically said to have dyspepsia, sick headache, liver complaint, or something of the kind, but everybody in the house knows what is the matter. He hath a devil. Dasim's bad cooking is, some folks say, responsible for as much mischief as his brother Haffan has accomplished with his wine. Nothing is too petty for him. He will possess at times the best-tempered youngster, and he displays a most diabolical ingenuity in spoiling a well planned dinner party by instigating a malapropos remark or introducing a controversial topic. He is the inventor of a code of table etiquette that has caused a heap of unhappiness, for a violation of it, such as the picking up of the wrong fork or sending the wine around the table against the sun brings down upon the offender a greater social penalty than a conventional breach of the moral law. He also introduced the tipping system and after-dinner speeches. Dasim does not confine his activities to the dining-room. He also holds sway in the kitchen and is the fomenter

of all the trouble with maids, cooks, and help generally, to say nothing about the trouble they have with their employers. On the whole, Dasim is not the least among his brethren, even though they do make a lot of fun of him because he does not introduce modern improvements, but sticks to the same old tricks that he used in the days of Eve and Lilith, and Jacob and Esau.

SEVENTH SON

One of his closest associates, next to Haffan, is Marrah, who as the master of music and dancing runs one of the broadest and most enticing highways leading to the halls of Iblis. Hardly had Jubal got out his patents on the first string and wind instruments before Marrah began to pervert them to his own purposes. As soon as Dionysos had stuck together the hollow reeds of his syrinx and Apollo had stretched the strings across the tortoise shell Marrah took possession of them. In Africa he uses the tom-tom, in America the phonograph or jazz band, to excite uncontrollable passions. He inspired the Lydian strains which soften the moral fiber. He taught the Sirens and the Lorelei. Young and otherwise charming virgins are deceived by him into thinking that they have musical genius, and then they spend years and all the money they can borrow in trying to reach high C and hammering ivory with their finger tips, causing thereby much misery to all within earshot, who nevertheless are inspired to encourage the practice by complimentary lies. He devised the nautch, the foxtrot, the corroboree, the bunny hug, the fandango, the bacchanale, the waltz, and the can-can, and may be re-

lied upon to bring out half a dozen new variations of the old motif within the next few years, for his ingenuity is inexhaustible. The whole horde of hops, dips, glides, skips, scrambles, hugs, squirms, prances, kicks, cuddles, writhes, and wiggles come from his fertile brain. He is the St. Vitus of the infernal hagiology. The saxophone and radio are his latest aids.

EIGHTH SON

It must not be supposed that in this division of labor the church is neglected. On the contrary there is a special ecclesiastical department, and this is under the efficient management of Dulhan, eighth of the sons of Iblis. The children of Dulhan attend church regularly, rarely missing a service of any denomination. Sitting invisibly by the side of the would-be worshipers they whisper inaudibly to distract attention from the devotions proper to the place and hour. They set the eye to roving over the congregation, and whatsoever it falls upon suggests some critical or malicious comment. Perhaps it is a question of the taste of a lady in the matter of headgear; perhaps it is a suspicion of the business morals of a pillar of the church; anything may serve the purpose of frustrating the aim of the service. The Beni Dulhan even enter the pulpit and whisper doubts to the preacher of the usefulness of his work, the truth of his message, and the sincerity of his hearers. But a better field even than the pews or the pulpit they find in the choir loft. Here, in complicity with his brother Marrah, the musical fiend, Dulhan can cause any amount of mischief, and it is not without

reason that certain of the stricter sects have banished choirs and musical instruments altogether.

Unlike the rest of his brethren, it cannot be said that the advance of civilization has enlarged the scope of Dulhan's operations, though some would say that this was because he had been quite too successful in his efforts at undermining the church. At any rate Dulhan no longer has the power he used to have when the secular arm was at his disposal, when the auto-da-fé was a public holiday, the rack and thumbscrews in operation, and kings trembled at the threat of bell, book, and candle. Nowadays, except for an occasional pogrom in Poland or a riot in India, Dulhan's power of persecution does not extend beyond a farcical and ineffective trial for heresy. But as superintendent of the paving department of the highways leading to the infernal regions he is kept as busy as ever.

NINTH SON

It is not necessary to dwell upon the deeds of Wassin, or, as some authorities call him, Tir, ninth of Satan's sons, because they are conspicuous and dreaded by all. He it is who is responsible for all public calamities, for battle and tempest, for plague, pestilence, and famine, and all like ills from which the Litany beseeches deliverance. The destruction of Pompeii and Messina, of Lisbon and Tokyo, are among his achievements. In the line of hydraulics he has doubtless never surpassed his first exploit in the days of Noah, though on account of the sparse population of the globe at that time the destruction was not so great as might have been ex-

pected from the effort. Of all the infernal family there is none with a greater host of helpers than Wassin. Their name is legion. The sands of the sea are scanty in comparison. What is more, they have the magic power of becoming invisible and multiplying by the million within a few minutes, so that a city is devastated in a day by a pestilence. With an innumerable host of bacteria, bacilli, microbes, parasites, he invades the bodily citadel, and then man falls a victim to the Black Death, the White Plague, the Yellow Fever, or the Scarlet Fever, to the pestilence that walketh in darkness or the destruction that wasteth at noonday.

Formerly it was supposed that death was carried on the wings of the wind, so Wassin was called "Prince of the Power of the Air" or "Malaria." We now know that he mostly makes use of insects as his agents of transmission, and this identifies him with Beelzebub, the God of Flies, and makes him responsible for at least seven of the ten plagues of Egypt. Zarathustra, one of the wisest of the prophets who have appeared upon the earth in the course of centuries to warn mankind of the wiles of the sons of Satan, taught his followers that to kill an insect was the best way of saying a prayer, and that to dig a drainage ditch was more acceptable to Ahura-Mazda than to burn a fat bullock on the altar. So, too, Goethe tells us that Faust achieved deliverance from the bonds of Mephistopheles, not by fasting and penance, but by turning his attention to sanitary engineering.

Thus the unending warfare goes on between the Sons of Eve and the Sons of Awwa. On strange battlefields and with novel arms, but the fight is ever the same;

new wiles are met with new defenses, mines are countermined, and wits match wits. 'Tis hard to tell at any time which way the conflict turns, for the Heavenly and Diabolic Hosts, as they descending and ascending meet upon this our world, adopt confusing disguises, fight under false flags, and often wrest from their opponents their most effective weapons. Our wildered eyes fail to distinguish the Angels of Light from the Angels of Darkness, and we strike out blindly at friend and foe. In this Holy War for the possesson of Mansoul there are no neutrals or noncombatants and never is a truce declared. Yet the land is fair to look upon and we often forget that it is a battlefield until of a sudden we are struck down and grievously wounded by a missile from some unseen source. We need sharper eyesight and a more understanding brain if we are to resist all the wiles of the devil. For this we must eat of the fruit of the tree of Knowledge of Good and Evil, but that stands in the midst of the Garden of Eden and an angel with a flaming sword guards the gate of it.

Still, our case is not altogether hopeless. We evidently do get a bite of this Forbidden Fruit once in a while, and I will explain to you how it happens, for not many people know the secret. It seems that Eve, like some—not all—of her daughters, was an economical soul, and when she had eaten the apple clear down to the core she thought it a pity to throw it away, as Adam did his. So she saved the seed and carried it out of the garden with her, past the terrible sentinel, by putting it in a pocket which she had cleverly concealed, after the manner of women, in the folds of her fig-leaf apron.

Now what became of the apple seeds nobody knows. Very likely they got scattered along the trail as the evicted pair wandered about in search of a new home, for we may assume that the pocket had a hole in it, since Eve had not had much practice at needlework, and an eyeless locust thorn with a vine tendril hitched to it does not make a very handy needle and thread, as you would know if you had tried it. It does not appear that Eve made any systematic attempt to plant them, or, if she did, Adam must have rooted out the seedlings as weeds or Cain pulled them up from mischief. Anyhow, after the babies came Eve was too busy and too happy to think much about the lost paradise. This, I say, is all speculation, and your guess is as good as mine, if not better. All we know is that somehow the Fruit of the Tree of Knowledge got scattered all over the world and is found today in the most unexpected places. Every little while somebody gets hold of one of the apples and it makes him wise. Sometimes he is wise enough to save the seed and try to cultivate it. The universities are all supposed to run nurseries for raising the fruit and grafting it on to common stock, but it's hard work and some years the yield is mighty slim. The trouble is that in the course of centuries the Fruit of the Tree of Knowledge has got crossed with all kinds of other trees. There is not a pure strain of it anywhere in the world. When they attempt to grow it pure by cuttings or self-fertilization it dies out. Then again it pops up as a mutant on all sorts of shrubs. It appears, transforms, and disappears in a more perplexing way than that Œnothera which the Mendelists are always talking about.

But in spite of all this some real progress is being made in the cultivation of the fruit, especially in recent years, and in time we may hope that there will be enough of it to go around. For it is the only antidote to the poison disseminated by the Sons of Satan. One who could live on it alone would be absolutely immune to all their witchcraft. For instance, enough has been grown to paralyze whole hosts of Wassin's pestilential myrmidons.

Whenever men eat of the Fruit of the Tree they become as Gods knowing good and evil. Unto them is given knowledge of the words which make powerless the mightiest of the offspring of the Evil One. Then may they command the jinns and afreets and they will obey; they will become the servants of man, the slaves of the lamp, and obedient to the ring which bears the seal of Solomon the Wise. Though a jinn may cover the earth like a tempest cloud, yet at the word of one who knows he will change into a mist and shrink together and condense until he can enter a brass bottle. Then the bottle can be stopped with a leaden seal whereon is engraved the Great Name of God and cast into the sea to remain for all the ages of ages.[1]

[1] The germ of this fantasia may be found in a footnote to "The Thousand Nights and a Night" (V. III, p. 229) by Sir Richard Burton, who doubtless knew more of devilry than any man since Faust. I am also indebted for a suggestion to Papini, who professed to have it on the lowest authority as he tells in "Que le Diable me dit" in the *Mercure de France*. Papini after the war repented of his past and wrote an ecstatic *Life of Christ* that became one of our best sellers. "The Nine Sons of Satan" was published in *The Unpopular Review* of January, 1915, and I am indebted to Mr. Henry Holt for the privilege of reprinting it.

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